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# School Breakfast Clubs, Social Relationships and Behaviour

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PhD

2014

# School breakfast clubs, social relationships and behaviour

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A thesis submitted in partial fulfilment  
of the requirements of Northumbria  
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in the Department of Psychology,  
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## **ABSTRACT**

The aim of the current thesis was to investigate whether a relationship exists between primary school breakfast club attendance and children's relationships and behaviour.

Study 1 presents a qualitative investigation of the views of parents, children and school staff on the advantages and disadvantages of school breakfast clubs. Findings showed a multitude of perceived benefits of breakfast club attendance including improvements in dietary habits, social relationships and familial routines. Though, issues with a lack of adherence to school food standards, problems with facilities and concerns regarding costs were also highlighted.

Studies 2 and 3 examine associations between breakfast clubs and children's relationships with their parents, peers and staff using longitudinal and cross sectional self report methods. Study 2 showed no significant differences between breakfast club attendees, after school club attendees and non-attendees in the quality of their relationships with their best friends and class teachers, and their experiences of peer victimisation across time. Study 3 showed attendance at before and after school clubs to be beneficial to children's perceptions social support.

Study 4 investigated whether children attending a school of higher socioeconomic status (SES) consumed more healthy breakfast items and fewer unhealthy breakfast items than children attending a lower SES school. Results showed that children from the higher SES school who also attended

school breakfast consumed more healthy breakfast items than children who attended school breakfast in the lower SES school.

Finally, Study 5 investigated children's behaviour within the breakfast club setting. Observations revealed that children displayed more positive than negative behaviours whilst in breakfast club; their behaviour did not improve or deteriorate across the duration of breakfast club; and there were no differences between children's behaviour as they participated in different breakfast club activities.

The mixed findings of this thesis highlight key areas for consideration for those involved in the implementation of school breakfast provision and methodological challenges that warrant consideration by those involved in future evaluations of breakfast clubs.

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Information from Chapter 1 on breakfast clubs and related outcomes has been included in a review article published in a peer reviewed journal:

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The findings from Study 1b (Chapter 2) were peer reviewed and accepted for publication in a journal special issue on children and food:

Graham, P.L., Russo, R., Blackledge, J. and Defeyter, M.A. (2014). Breakfast and Beyond: The Dietary, Social and Practical Impacts of a Universal Free School Breakfast Scheme in the North West of England, UK. *International Journal of Sociology of Agriculture and Food*, 21 (3), 261-274.

The findings from Study 1a (Chapter 2) and Study 5 (Chapter 6) have been submitted for publication:

Graham, P.L., Russo, R. & Defeyter, M.A. (Under review). The advantages and disadvantages of breakfast clubs according to parents, children and school staff in the North East of England, UK. *Frontiers in Public Health*.

Graham, P.L., Russo, R. & Defeyter, M.A. (Under review). Breakfast clubs: A positive start to the school day. *Frontiers in Public Health*.

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

Any ethical clearance for the research presented in this thesis has been approved. Approval has been sought and granted by the Northumbria University Faculty of Health and Life Sciences Ethics Committee.

Name:

Signature:

Date:

## **CHAPTER 1: Introduction**

### **1.1. Background and Overview**

Due to the numerous benefits associated with regular breakfast consumption, breakfast is widely acknowledged as the most important meal of the day. People who regularly consume breakfast have been found to consume fewer calories from unhealthy snacks, have lower body mass index and have superior macronutrient profiles compared to those who skip breakfast (Haire-Joshu et al., 2011; Hoyland et al., 2009). Despite the apparent benefits associated with regular breakfast consumption, breakfast skipping remains a prevalent habit amongst children and adults (Jackson, 2013). Although adult breakfast habits are important, the breakfast habits of children have received particular attention from researchers and policy makers as these early consumption patterns not only influence health and wellbeing during childhood (Szajewska & Ruszczynski, 2010) but have also been found to have an impact on health behaviours and outcomes into adulthood (Smith et al., 2010; Vereecken, Ojala & Jordan, 2004).

Recent reviews of the literature on breakfast habits revealed that children and adolescents are more likely to skip breakfast than any other meal, with poorer breakfast habits observed particularly in adolescents, females and lower socio-economic groups (Rampersaud et al., 2005; Rampersaud, 2009). In an attempt to address the issue of breakfast skipping and to support the growing need for extended hours of available childcare, many schools offer children a breakfast meal on the school premises prior to the start of the formal school day through provision of a breakfast club (Shemilt

et al., 2004). Researchers investigating school breakfast clubs have found some promising results with attendance being linked to improvements in children's intake of fruit at breakfast (Shemilt et al., 2004), increased consumption of healthier breakfast food items, improved attitudes to eating breakfast (Murphy et al., 2010) and reduced short-term hunger ratings (Mhurchu et al., 2012). However, not all studies have reported positive outcomes, for example Waehrer (2008) reported an association between breakfast skipping and participation in a school breakfast program. Moreover, some studies have reported no relationship between breakfast club attendance and outcomes such as classroom behaviour and cognitive performance (e.g. Murphy et al., 2010). Despite an array of studies being conducted on school breakfast clubs, there is currently no clear consensus regarding any potential relationship between school breakfast club attendance and children's cognitive and social development and their health and wellbeing. What is more, a common focus on the impact of the breakfast meal has emerged across the majority of studies. Whilst a focus on the impact of the breakfast meal is important, very few studies have considered the possible influences of the social environment.

A series of studies investigating the potential association between breakfast club attendance and children's social relationships and behaviour are presented throughout this thesis. The aim of the current chapter is to summarise information on the establishment of breakfast clubs and provide a review of relevant literature pertaining to children's breakfast habits and breakfast clubs in the UK and worldwide. Gaps in the existing research base and methodological considerations will also be discussed.



## **1.2. Children's breakfast habits**

Breakfast has been defined in simple terms as “a meal eaten in the morning, the first of the day” (Oxford Dictionaries, n.d.). Within the research literature however there is currently no consensus on a definition of breakfast. Siega-Riz, Popkin and Carson (1998) summarised the multitude of available breakfast definitions by suggesting “Breakfast can be defined in various ways, including what a person perceives as breakfast, the type of food consumed, a meal consumed at a specific time, or the first meal consumed after awakening” (p. 749S). Despite differing definitions of breakfast across studies, it is generally accepted that the consumption of breakfast can have positive effects on health and behaviour (Smith, 2012) and more specifically that regular breakfast consumption can reduce over-eating and obesity and increase alertness and learning in children (Imberman & Kugler, 2012).

### **1.2.1. Biological Mechanisms**

The significance of the breakfast meal, particularly for children and adolescents, is highlighted when biological mechanisms are considered. The duration between the evening meal and breakfast the following day is the longest time that children and adolescents go without an intake of energy and essential nutrients from food and drink. During sleep, regulatory mechanisms ensure that the brain is supplied with required levels of glucose but on waking the body needs a further intake of food to cope with increased energy expenditure that ensues throughout the morning (Pollitt, 1995; Wyon et al., 1997). When the breakfast meal is skipped the overnight fast is prolonged, potentially leading to hunger and metabolic stress (Matthews, 1996). In the short-term skipping breakfast is thought to have a detrimental

effect on children's cognitive capabilities but if breakfast is skipped repeatedly over a longer period of time, the cumulative cognitive detriment is said to impact negatively on children's educational performance (Pollitt, 1995; Wyon et al., 1997). Research investigating cognitive and academic outcomes in relation to breakfast consumption is discussed in subsequent sections of the current chapter.

### **1.2.2. Cognitive Performance**

Much research has been carried out investigating the effects of breakfast skipping on children's cognitive performance but mixed results have been reported. In a recent study by Wesnes, Pincock and Scholey (2012) 1386 children and adolescents aged 6 - 16 years from 32 schools in the UK completed a series of online cognitive tests and reported on their food and drink intake. Children were invited to complete: a simple reaction time test, which required them to press a key as quickly as possible in response to a target stimuli; a choice reaction time test, which involved pressing one of two keys as quickly as possible depending on the stimuli presented; a digit vigilance test that entailed pressing a key when two matching stimuli appeared simultaneously on screen; and a picture recognition task, which required children to remember a sequence of pictures then to later view a second series of pictures and specify which ones were new and which they had viewed previously. Before completion of the cognitive tests children reported their age and gender in addition to listing any foods and drinks they had consumed for breakfast. Children were also asked whether their breakfast consumption behaviour on the day of reporting matched their typical breakfast habit. Results showed that children who consumed

breakfast responded quicker in tests of attention, had less variable response speeds across tasks, made faster correct picture recognition responses, were superior in differentiating between new and previously presented pictures and recorded fewer false alarms and detected more targets on the digit vigilance task.

These results supported the findings of an earlier lab based experiment conducted by Wesnes et al (2003) in which 29 children aged 9 - 16 years participated in a four-way randomised crossover design study across 5 consecutive days. The aim of the study was to investigate whether the consumption of breakfast cereals could help to reduce cognitive decline across the morning. On the first study day children attended the lab to practice the cognitive tasks that they would complete throughout the week to allow them to become familiar with the tasks and to reduce the potential for training effects. On the remaining four test days children arrived at the lab having been instructed to consume no food or drink apart from water from 8.00pm the previous day. On arrival children completed a series of tests taken from the Cognitive Drug Research battery (Wesnes et al., 2000), which provided baseline measures of children's working memory, episodic memory and attention. Children were also asked to complete 16 Bond-Lader mood and alertness items for which they were presented with a series of 10cm lines anchored at each end with opposing key words e.g. 'alert-drowsy' and 'calm-excited'. An additional three lines anchored at each end with the words 'not at all' and 'extremely' were administered to determine children's 'hunger,' 'fullness' and 'desire for food'. Children were asked to select a point on each line to indicate their current state. Following completion of the

baseline cognitive, mood, alertness and satiety measures children were served one of four set breakfast options: 1) 45g Shreddies cereal with 125ml semi-skimmed milk; 2) 30g Cheerios cereal plus 125ml semi-skimmed milk; 3) 330ml orange flavoured glucose drink; 4) no breakfast. The breakfast option that children were provided each day was determined by a counterbalanced breakfast sequence. After breakfast each day, cognitive testing and mood, alertness and satiety measures were repeated at 9:00am, 10:00am, 11:00am and 12:00pm.

Results showed that attention and memory declined across the morning but the declines were much less when cereal was consumed. Interestingly, attention declined much quicker following consumption of the glucose drink than when no breakfast was consumed. Self reported alertness and contentment decreased following no breakfast but increased in the other three breakfast conditions; though alertness and contentment reported after the glucose drink decreased to the level of no breakfast after 10:00am. Children reported feeling more satiated following consumption of cereal and gradually altered across the morning to almost reach the lower levels of satiety reported in the no breakfast condition by 12:00pm. The glucose drink increased feelings of fullness at 9:00am but levels decreased thereafter to match the no breakfast condition. The studies conducted by Wesnes et al (2003; 2012) demonstrated positive effects of breakfast consumption on children's memory, attention, mood, alertness and satiety. Moreover, Wesnes et al (2003) argued that the carbohydrates in breakfast cereals help to reduce the decline in cognitive performance that ensues across the morning.

However, recent research by Defeyter and Russo (2013) showed that the effects of breakfast on cognitive performance are not straightforward.

Adolescents aged 13 - 15 years from a high school based in the North East of England completed five-day food diaries through which they reported on their breakfast consumption habits. For the purpose of the study breakfast was defined as anything consumed between waking and the commencement of lunch. Forty adolescents were classified as habitual breakfast skippers as they reported skipping breakfast on five consecutive days and were therefore included in the main study. Breakfast skippers were recruited as previous studies have shown that the effects of breakfast on cognitive performance are more pronounced in those who do not usually consume breakfast.

On test days adolescents were instructed to arrive at school at 8:00am having had no caffeine for the previous 12 hours and no food from midnight. On arrival at school, baseline measures of cognitive performance, mood and satiety were taken. Cognitive performance was measured using low and high cognitive demand versions of five computer based cognitive tests: a delayed word recall task required adolescents to memorise 15 words, which they were subsequently asked to recall at the end of the entire testing session. The complexity of the task was varied according to whether the words presented could be categorised (low cognitive load) or not (high cognitive load). A choice reaction time task involved pressing given keys on a keyboard in response to two (low cognitive load) or four (high cognitive load) target letters appearing on a computer screen. For the rapid visual information processing task adolescents were asked to detect strings of three odd or even digits in a continuous series. In the low cognitive load

condition digits were presented at a rate of 80 digits per minute and in the high cognitive load condition presentation was 100 digits per minute. In the Stroop task adolescents were presented with a series of colour words (red, blue, green and yellow) and were required to press the button corresponding to the colour of the font the word was presented in; for example if the word 'yellow' appeared in green font the correct response was to press the green button. In the low cognitive load condition words and font colours were congruent i.e. the word yellow presented in yellow font, while in the high cognitive load condition the words and font colours were incongruent i.e. the word yellow presented in blue font. Finally, for serial subtractions adolescents were presented with a randomly generated number on screen and were asked to count back from that number in 3's (low cognitive load condition) or 7's (high cognitive load condition) entering their answers into the computer each time. Additionally, adolescents completed measures of hunger, thirst and satiety and a 16-item Bond-Lader mood scale measuring alertness, calmness and contentment. For each item adolescents were presented with a 10cm line anchored from 'not at all' to 'extremely' and were asked to place a mark on each line to indicate their current state relating to each mood state. Following completion of the baseline measures adolescents were given either a breakfast of 35g All Bran with 125ml milk or no breakfast at 8:30am. Adolescents were given 15 minutes to consume breakfast then went into their usual lessons before returning to complete the cognitive tasks, mood scales and satiety measures at 10:45am.

Analysis revealed a mixed pattern of results regarding the effects of breakfast on cognitive performance. For easy word recall adolescents

recalled significantly more correct words following breakfast compared to no breakfast. For hard word recall, a significant breakfast by time interaction showed that adolescents correctly recalled significantly more words across the school morning following breakfast, while performance deteriorated following no breakfast. Moreover, a significant three-way interaction (breakfast\*time\*task difficulty) showed that the difference in performance between the breakfast and no breakfast condition was driven by task difficulty with adolescents performing better across the school morning following breakfast when the task was made harder. For the Serial 3's and Serial 7's tasks, performance increased across the school morning following breakfast but decreased following no breakfast. For the remaining choice reaction time, Stroop and rapid visual information processing tasks, no significant differences were identified between breakfast and no breakfast conditions. Findings from the self-report Bond-Lader scales showed that adolescents felt more calm, content and alert following breakfast. All adolescents felt more hungry pre-breakfast than post-breakfast and felt fuller across the morning following breakfast than no breakfast. In their concluding remarks, Defeyter and Russo highlight the mixed results that have emerged from different studies of breakfast and cognitive performance but also the methodological differences between these studies (i.e. type of breakfast and socio-economic status of the populations investigated) that make comparisons between studies difficult. In addition, Defeyter and Russo point out that task difficulty is another area that warrants further exploration in the breakfast and cognition field.

In another recent experimental study Kral et al (2012) also showed that the effects of breakfast on cognitive performance remain equivocal. Using a crossover design, Kral et al compared the cognitive performance of 21 children aged 8 - 10 years following breakfast consumption and omission. On two test days children arrived at the lab at 8:00am having consumed no food or drink other than water from waking up. At 8:15am children completed a battery of computerised cognitive tests taken from CogState software, which provided a baseline measure of their cognitive performance on each day. Children completed a one back task, which tested their attention and working memory. The task required children to view a series of cards on screen and decide whether each card was the same or different to the previous card. The chase task required children to follow a target across a grid from a given starting point moving only one square at a time horizontally or vertically; this task tested children's visual motor functioning. The Groton maze learning test assessed children's executive functioning and spatial problem solving by asking them to find a hidden 28-square pathway on a 100 square grid to join a given start and end point. For the detection task children pressed the 'y' key each time a card appeared face up on screen as a test of psychomotor function and speed of processing. Children's visual attention and vigilance were assessed using the identification task, which required children to press the 'y' key if the card that appeared on screen was red and the 'n' key if the card was not red. Finally, three tests assessed children's visual learning and memory: the continuous paired associate task, which required children to remember the locations of a series of pictures and specify where in a given grid the pictures originally



appeared; the one card learning task, which involved children viewing a series of cards being turned one at a time and deciding whether they had seen each card previously within the card sequence; and the Groton maze learning test (delayed recall), which required children to replicate from memory the maze they had learned previously in the Groton maze learning task. In addition to completing cognitive tasks, children also self reported energy (i.e. "How much energy do you think you have right now?"), fatigue (i.e. "How tired are you right now?"), overall wellbeing (i.e. "How good do you feel right now?") and cheerfulness (i.e. "How cheerful are you right now?") using 10cm visual analogue scales ranging from 'not at all' to 'extremely'. On one test day children were served breakfast at 8:45am (30 minutes following baseline measures), which consisted of 32g of ready-to-eat cereal with 192g milk, a banana and 187g orange juice. Children were given 30 minutes to consume breakfast and were instructed to eat all the breakfast provided. Cognitive tests were then administered again 45 minutes (9:30am), 90 minutes (10:15am) and 135 minutes (11:00am) after the start of breakfast. Visual analogue scales were also completed again at 9:15am, 9:30am, 10:15am, 11:00am, 11:40am and 12:40pm. When children were not participating in research tasks they remained in the lab and played games or listened to music. An ad libitum lunch was consumed across a 20-minute period from 11:45am. Analyses of data collected on children's cognitive test scores showed no significant differences in performance on breakfast and no breakfast days. Similarly no significant differences were identified between breakfast and no breakfast days for measures of overall wellbeing and fatigue. However, children reported being more cheerful and having more

energy on the day that they consumed breakfast than on the day they did not consume breakfast. In response to the lack of significant findings resulting from their study, Kral et al proposed a number of additional factors, which were not considered within their study that warrant further investigation. Firstly, the effects of one day of breakfast skipping were tested in children who habitually consumed breakfast. It may be the case that a single day of breakfast skipping within this sample was not detrimental enough to result in a decline in cognitive performance, which might ensue if breakfast was skipped more frequently. Furthermore, Kral et al suggested that the nutritional composition of breakfast might play a key role in cognitive performance. This is an important consideration given that there is presently no strict definition of what constitutes breakfast for children and adolescents and it is clear from the research presented that there is a lack of consistency across studies in terms of the breakfast served to children before cognitive testing takes place. While cereal appears to be a popular breakfast option used in studies of cognitive performance (e.g. Mahoney, Taylor, Kanarek, & Samuel, 2005; Smith, Clark & Gallagher, 1999) research by Ingwersen et al. (2007) has demonstrated that the nutritional content of breakfast, specifically glycaemic index (GI), might play a crucial role in the effects of breakfast on cognition. GI has been defined as “a measure of the rate at which [food] increases and maintains blood glucose levels” (Ingwersen et al, 2007; p240). In order to measure the potential impact of GI on cognitive performance Ingwersen et al recruited 64 children aged 9 - 11 years (mean age = 9:3 years) from primary schools in the North East of England. Children were given a breakfast consisting of either 35g Coco Pops (high GI breakfast) or

35g All Bran (low GI breakfast) across two consecutive days. Both cereals were served with 125ml of semi-skimmed milk and the order that children received the cereals on each day was counterbalanced. Children were required to fast overnight and baseline measures were taken in school at 9:00am on each test day. Following a similar protocol to the Wesnes et al (2003) study described previously, children completed a series of tests taken from the Cognitive Drug Research battery in the following order: word presentation; immediate word recall; picture presentation; simple reaction time; digit vigilance; choice reaction time; spatial working memory; numeric working memory; delayed word recall; delayed word recognition and delayed picture recognition. Breakfast was provided at 9:30am then children completed the cognitive test battery again at 9:40am, 10:40am and 11:40am. For the purpose of analysis 5 scores were calculated: 1) Speed of Attention, which was the combined reaction times for the simple reaction time, choice reaction time and digit vigilance tests; 2) Speed of Memory, which was the sum of the working memory, spatial working memory, delayed word recognition and delayed picture recognition reaction times; 3) Accuracy of Attention was the combined percentage accuracy from the choice reaction time and digit vigilance tasks; 4) Secondary Memory resulted from the percentage accuracy of the word recognition, delayed picture recognition, immediate word recall and delayed word recall tests; 5) Working Memory was derived from the percentage accuracy scores of spatial working memory and numeric working memory tasks. Results of the investigation showed that the decline in accuracy of attention was greater following a high GI breakfast compared to a low GI breakfast. Secondary memory performance

was also significantly better following consumption of a low GI breakfast compared to a high GI breakfast. No further effects of GI on cognitive performance were identified. The authors concluded that when a low GI breakfast is consumed a smaller decline in memory and attention ensues later in the morning compared to when a high GI breakfast is eaten.

However, they provided a note of caution acknowledging that only two of the five measures of cognitive performance were responsive to GI suggesting that the effects of GI on cognitive performance cannot be generalised.

The complexity of the relationship between breakfast consumption and cognitive performance was further highlighted in a recent review of the research literature conducted by Hoyland et al (2009). The review included studies carried out between 1950 and January 2009 that investigated the impact of breakfast on cognitive performance in children aged 4 - 18 years. All types of breakfast manipulations were considered including the effects of breakfast consumption, breakfast skipping and breakfast type but only standardised outcome measures of cognitive performance were included; subjective ratings such as fatigue and teacher-reported performance were excluded. Three-hundred-and-fifty articles on breakfast and cognitive performance were retrieved but only 41 articles detailing 45 studies met the inclusion criteria for review with the main reason for exclusion being that the studies had sampled adult and elderly participants. Twenty-eight of the reviewed studies investigated the acute effects of breakfast consumption compared to breakfast omission or the effects of breakfast type on cognitive performance. Thirteen studies investigated the long term impact of breakfast club attendance on cognitive performance and four studies looked at the

effects of habitual breakfast on cognitive performance. For studies comparing breakfast and no breakfast, findings generally showed a positive relationship between breakfast consumption and cognitive performance with benefits of breakfast being most prevalent in tests of memory and attention, when tasks were more demanding and later in the morning when typically non-consumption of breakfast was related to a decline in performance. Studies looking at different types of breakfast yielded mixed results and were difficult to compare as the nutritional composition of foods served were under-reported making comparisons between studies difficult. Where an effect of breakfast type was reported, this was generally found later in the morning suggesting that the timing of post-breakfast testing is important. Owing to the heterogeneous nature of the studies comparing breakfast types it was not possible for Hoyland et al to draw any firm conclusions about the effects of different types of breakfast on the cognitive performance of children based on the studies reviewed. However, the complexity of measuring cognitive performance in relation to breakfast consumption was further emphasised through studies comparing under-nourished children with well-nourished, geographically matched controls. Hoyland et al reported that breakfast consumption led to better cognitive performance in under-nourished children while few or no effects were found in well-nourished matched controls. Effects were particularly evident in tests of memory and verbal fluency. In studies investigating the effects of school breakfast club attendance on cognitive performance results were generally positive with school breakfast club attendance being linked to improvements in maths and arithmetic scores in particular. However, where scholastic achievement tests

were employed it was difficult to ascertain whether the positive effects of breakfast club attendance were due to breakfast consumption per se or whether increased school attendance also has an impact. Finally, four studies considered the impact of good quality breakfast consumption (e.g. breakfast consisting of dairy, cereal and fruit) or habitual breakfast consumption on cognitive performance. Results showed a positive relationship between habitual or good quality breakfast consumption and superior cognitive performance. Furthermore, one study showed that when a good quality snack was consumed after children had eaten either a low quality breakfast or skipped breakfast completely, their cognitive performance improved. Overall, Hoyland et al concluded that breakfast consumption generally had a positive effect on children's cognitive performance. However, the studies reviewed were suggested to be of poor quality and fraught with methodological issues such as a lack of randomisation and a shortage of necessary details (e.g. breakfast composition, children's weight status) making comparisons between studies difficult. Yet, it is important to note that the use of randomisation is complex and not always feasible, particularly when research is carried out with children within school settings. Such methodological issues are discussed in further detail later in the current chapter.

More recently in an opinion article by Zilberter and Zilberter (2013) further arguments challenging the relationship between breakfast consumption and cognitive performance were put forward. The authors considered the findings from nine studies of children and adults and reported that "seven metabolically distinct breakfast types have 16 different effects on nine

populations of children and adults” (p. 3). They found that for children the effect of breakfast consumption on cognitive performance was determined by the composition of the breakfast, children’s nutrient status and IQ. In considering studies where the composition of breakfast was investigated Zilberter and Zilberter found mixed results with consumption of a low glycaemic index (GI) breakfast leading to less of a decline in attention and memory task performance than when a high GI breakfast was consumed; however consumption of a high GI breakfast was linked to better vigilance. In terms of children’s nutrient status, studies showed that for malnourished children skipping breakfast on one occasion was detrimental to cognitive performance including problem solving, comprehension and short term memory tasks. However, for well nourished children who typically consumed breakfast, skipping breakfast on one occasion had no impact on various cognitive outcomes including attention, working memory and spatial problem solving. Moreover, skipping breakfast in well nourished children was linked to improved memory recall. Finally, cognitive task performance declined when breakfast was skipped by children with below average IQ (<100) but information processing speed improved for children with above average IQ when breakfast was skipped. Zilberter and Zilberter quoted Bellisle (2004) to conclude “skipping breakfast has deleterious effects, has no effect or even has beneficial effects depending on what the task is, when it is performed after breakfast, the child’s IQ, the child’s age and nutritional status” (p. 3) thus highlighting the complexities involved in investigating the impact of breakfast consumption on cognitive performance.

### **1.2.3. Academic Performance**

A child's academic outcomes are thought to impact greatly on the quality of their adult life. For this reason, school improvement policies consistently focus on the quality of teaching but children's nutritional status might also be important (Ani & Grantham-McGregor, 1999). The potential for breakfast to have an impact on academic performance has been investigated in prior studies as hunger is thought to impede learning (Birch, Atchoarena, Gasperini, Hakeem & Hazelman, 2002) and as mentioned previously breakfast skipping is highly prevalent in children and adolescents of school age (Rampersaud, 2009). Young-So (2013) used data collected from the Korean Youth Behaviour Web-based Survey to investigate the relationship between breakfast consumption and academic performance. Seventy-five-thousand-six-hundred-and-forty-three adolescents (mean age = 15.1 years; SD=1.75 years) from 800 Korean middle and high schools participated in the survey. Adolescents were asked to rate their academic performance from the previous 12-months on a 5 point scale: 1) very high; 2) high; 3) average 4) low and 5) very low. The researcher then dichotomised responses so adolescents were categorised as having either 1) below average academic performance or 2) average or high academic performance. Adolescents were also asked to state how many days per week they consumed breakfast. They additionally self reported information on a range of demographic (i.e. age, parental education and family income status), wellbeing (i.e. mental stress) and health related factors (i.e. body mass index, frequency of smoking and drinking and frequency of exercise), which were entered as covariates into the analyses. Results showed a positive relationship



between frequency of breakfast consumption and self-reported academic performance. For females, two to seven days of breakfast consumption were positively associated with academic performance whereas the relationship did not become significant for males until breakfast was consumed on at least five days per week. The positive relationship between breakfast and academic performance was not affected by any of the other covariates entered into the analysis. Young-so concluded that despite the cross sectional nature of the study, the findings from such a large sample are representative of a positive relationship between breakfast consumption and academic performance in Korean adolescents.

In an earlier study utilising data from the Oslo Health Study, Lien (2007) investigated the association between breakfast consumption, mental distress and academic performance in a sample of 7305 adolescents (aged 15 - 16 years). Breakfast consumption was measured via a single question: 'How often do you eat breakfast in an ordinary week?' with five possible responses: Seldom/Never; 1-2 times per week; 3-4 times per week; 5-6 times per week and Daily. Academic performance was determined by average school grade, which was calculated using adolescents' most recently recorded grades for English, written Norwegian, Maths and Social Sciences. Average grade scores ranged from one (lowest) to six (highest) and adolescents were grouped as  $\leq 3$  or  $>3$  for average grade. Finally, mental distress was measured using the ten item Hopkins Symptoms Checklist, which assessed the intensity of internalising problems such as anxiety and depression (i.e. 1=not at all to 4=extremely) with reference to the week prior to completion of the scale. Findings of the investigation showed

that more frequent breakfast consumption was associated with improvements in average school grade and a reduction in mental distress. The author argued that the results of the investigation highlight the importance of promoting breakfast to families, particularly working parents who might find it difficult to set time aside in the morning for breakfast.

#### **1.2.4. Health Related Outcomes**

Breakfast habits in childhood and adolescence have been linked to numerous health outcomes including body mass index, cardio-respiratory fitness and metabolic status, which can have important implications for health through to adulthood. Recently, Haire-Joshu et al (2011) investigated the relationship between breakfast habits, snack consumption and body mass index. Data were collected from 904 mothers aged 12 to 19 years (mean age = 17.5 years) from 27 American states participating in the 'Moms for a Healthy Balance' intervention. The intervention aimed to reduce the weight that teen mothers retained after childbirth. Mothers self-reported the number of days per week that they consumed breakfast and completed the Snack and Beverage Food Frequency Questionnaire (SBFFQ). The SBFFQ presented mothers with a list of 31 snack and beverage items and asked them to report how often they consumed each item during the previous 7 days. Mothers' height and weight were also collected to allow body mass index to be calculated. Results of the analyses showed that 42% of mothers skipped breakfast on 5-7 days per week. Those who reported consuming breakfast on most days during the week consumed more fruit and vegetables, drank more milk and water and consumed fewer calories from sweet and salty snacks and sweetened beverages than those who skipped

breakfast. Finally, breakfast consumers had a lower body mass index than breakfast skippers. The findings of the research emphasise the key role of breakfast in the maintenance of body mass index and healthy dietary habits.

A positive relationship between breakfast consumption and body mass index in addition to physical activity and cardio-respiratory fitness was also reported in a study by Sandercock, Voss and Dye (2010). Four-thousand-three-hundred-and-twenty-six children and adolescents aged between 10 and 16 years were recruited from primary and secondary schools in the East of England. Trained researchers measured the height and weight of children and adolescents to allow for calculation of body mass index (BMI). The Physical Activity Questionnaire was completed to gauge children and adolescents' physical activity levels during the previous 7 days, and cardio-respiratory fitness was determined through child and adolescent participation in the Progressive Aerobic Capacity Endurance Run, which involved completion of shuttle runs while keeping up with a timed sound, i.e., participants had to reach the end of each shuttle before a sound was audible. Finally, children and adolescents were asked how many days they normally ate breakfast at home during the school week with responses being grouped into 'Always' (5 days), 'Sometimes' (1 - 4 days) or 'Never' (0 days). Results showed that 7% of participants never ate breakfast at home during the school week, 25% had breakfast sometimes and 68% had breakfast everyday with boys being more likely to eat breakfast than girls. Furthermore, boys who always ate breakfast had a lower BMI than boys who sometimes ate breakfast. Physical activity was higher in boys who consumed breakfast always or sometimes compared to those who never

consumed breakfast and cardio-respiratory fitness increased with greater frequency of breakfast consumption. Similarly, girls who always ate breakfast had lower BMI than girls who sometimes ate breakfast and levels of physical activity and cardio-respiratory fitness increased with an increasing frequency of breakfast consumption. Sandercock et al concluded that their findings support previous investigations, which have shown a relationship between breakfast frequency and BMI but theirs is the first study to demonstrate a relationship between breakfast consumption and cardio-respiratory fitness, which is an important indicator of child and prospective adult health. These findings provide support for the promotion of frequent breakfast consumption amongst children throughout the school week.

#### **1.2.5. Breakfast Skipping**

Despite the apparent benefits of breakfast consumption including the advantages relating to health, cognitive and academic outcomes outlined previously, breakfast remains the most frequently skipped meal amongst children and adolescents (Rampersaud, 2009). In a study by Brugman et al (1998) the school day breakfast habits of children and adolescents in the Netherlands were investigated. Data were obtained from the Child Health Monitoring System (CHMS), which is an annual assessment of the health of almost 5000 children and adolescents aged approximately 5, 8, 11 and 14 years. For the purpose of their investigation, Brugman et al used data collected from a food questionnaire, which allowed identification of what children and adolescents consumed for breakfast, brunch, lunch and evening meal in the 24-hour period prior to completion of a health check that was carried out as part of the CHMS. Food questionnaires were completed by

parents of primary school age children (i.e. 5 - 11 year olds) and were self-completed by secondary school age adolescents (i.e. 13 - 15 year olds). Demographic information concerning child and adolescent gender, age, school type, family structure, ethnicity (defined by father's nationality), father's education level, mother's employment status and the community size served by the school (i.e. rural, urban or large city). Four-thousand-two-hundred-and-four food questionnaires were completed but data were excluded where questionnaires had been completed on a Sunday or on a special day such as a child's birthday or on a day when a child was ill as the researchers set out to investigate breakfast habits on a typical school day. Data from 3138 children and adolescents were analysed. Thirty-one percent of the sample were aged 4 - 6 years, 19% were aged 7 - 9 years, 22% were 10 - 12 years and 28% were 13 - 15 years. Results of the investigation showed that 5% of primary school children and 13% of those in secondary school skipped breakfast on the day of reporting. Further consideration of breakfast skipping in relation to demographic characteristics revealed that breakfast skipping was more prevalent amongst girls, children living with a single parent and those children whose father had a low level of education. When children's food choices and meal patterns were also examined in relation to their breakfast habits it became apparent that brunch was consumed more frequently by children who skipped breakfast (45%) than children who consumed breakfast (3%). Moreover, lunch and dinner were more likely to be skipped amongst children who also skipped breakfast (91% and 97% respectively) than those who consumed breakfast (97% and 99% respectively). Finally, children who skipped breakfast ate more salty snacks

(31%) and drank more soft drinks (85%) than children who had breakfast (22% and 76% respectively). Bread, milk, fruit, vegetables, potatoes, meat and sweets were consumed more frequently by children who had breakfast on the day of reporting. The results of the study by Brugman et al (1998) suggest that breakfast skipping might form part of a wider spectrum of poor dietary habits including inadequate uptake of other meals across the day, which are substituted with high fat and high sugar drinks and snacks. Moreover, they demonstrated that certain populations, including females, older children and those whose parents have low educational status, seem to be more susceptible to breakfast skipping. In discussing their results the authors reported findings from a 'comparable study' (p. 327) conducted in 1983 by Haar, Janzen and Snel in which breakfast skipping was evident in just 4% of children. Brugman et al therefore argued that their results show an increase in the prevalence of breakfast skipping across a ten year period. What is more, the 1983 sample contained more children of parents of low educational status, which was a characteristic associated with poorer breakfast habits in the study by Brugman et al who therefore argued that the increase in breakfast skipping might be even greater than their study showed. Furthermore, Brugman et al suggested that their findings mirror those of other studies conducted in the USA, Canada, France and Norway, which showed a decrease in breakfast consumption across time and poorer breakfast habits amongst females and older children. They therefore concluded that more work needs to be done to encourage breakfast consumption amongst populations at risk of poorer breakfast habits.

In a more recent study, Mullan et al (2014) examined the breakfast patterns of adolescents in the UK and Australia and showed that breakfast skipping remains a prevalent habit. Through completion of an online questionnaire 321 adolescents from Australia and 160 adolescents from the UK aged 11 - 18 years reported on what they had for breakfast (i.e. breakfast type and portion size), whether they prepared their own breakfast and who they consumed breakfast with on a single school day. Those who did not consume breakfast on the day of reporting were asked to specify reasons for non-consumption of breakfast. Results showed that 12% of the overall sample skipped breakfast on the day of reporting with breakfast skipping being more prevalent in the UK sample (18%) than the Australian sample (8%). A lack of time, lack of appetite, lack of enjoyment of breakfast and weight control were some of the reasons adolescents gave for skipping breakfast. Mullan et al reported that their study showed an improvement in the breakfast habits of Australian adolescents when compared to earlier studies that reported 10-12% of adolescents skipped breakfast (Williams, 1995; Shaw, 1998). However, breakfast skipping in UK adolescents was reported to have remained constant since Lattimore and Halford (2003) found that 19% of adolescents skipped breakfast around a decade ago. The findings of Mullan et al are useful as they present recent breakfast skipping prevalence data collected from adolescents sampled from two different countries using the same method of data collection, which is unique. Despite this, data from only a single day were utilised so it is not possible to determine whether the breakfast patterns reported were representative of adolescents' typical breakfast habits. Though, in an earlier study by Alexy,

Wicher and Kersting (2010) breakfast intake was recorded on three consecutive days across a 21 year period and breakfast skipping prevalence was reported to be of a similar rate to the studies discussed previously. Alexy et al analysed data from 1081 children and adolescents aged 2 - 18 years collected between 1986 and 2007 for the Dortmund Nutritional and Anthropometric Longitudinally Designed (DONALD) study. Data were collected on diet, growth and development of participants between infancy and adulthood for the DONALD study but Alexy et al focussed only on breakfast data obtained from three-day weighed food diaries, which were completed by parents of younger children and self-reported by older children; specific ages of those who self reported and those whose parents reported on their behalf are not provided by the authors. A total of 23400 days (7800 three-day records) of dietary data were analysed. With breakfast defined as 'any eating occasion between 05.00 and 08.59 hours' (p. 1796) breakfast consumption took place on 77.6% of all recorded days and was more common during the week than on weekends. Three-thousand-five-hundred-and-twenty-nine three-day records completed across consecutive week days were selected for further analysis to determine 'regularity of breakfasting' (p. 1797). Analysis showed that 75% reported consuming breakfast on all three days; 11% had breakfast on two days; 7% reported having breakfast on one day and 7% skipped breakfast on all three days. Moreover, the number of children and adolescents consuming breakfast on three consecutive days reduced significantly across time in the 6 - 12 year old and 13 - 18 year old age groups but not in the 2 - 5 year old group. These results follow a similar pattern to those reported previously, which show that breakfast skipping has



increased across time and becomes more prevalent with increasing age. Alexy et al propose that it is important to identify changes in breakfast habits across different age groups as this information can inform intervention schemes such as breakfast programmes, which they suggest can be helpful in reducing the prevalence of breakfast skipping.

### **1.3. School Breakfast Programs and Clubs**

In an effort to increase opportunities for children and adolescents to consume breakfast before the start of the formal school day and thus reduce the potential detrimental effects of breakfast skipping many schools worldwide offer breakfast to pupils through provision of a school breakfast program or breakfast club. Whilst breakfast schemes are also made available to children through a multitude of organisations including community centres and church halls, breakfast schemes that take place in schools will remain the focus of the current thesis.

According to Shemilt et al (2004), the earliest breakfast clubs began in the USA in 1966 when the School Breakfast Program (SBP) was introduced. The SBP began as a pilot project implemented by the US Department of Agriculture (USDA) to provide financial support to schools serving breakfast to children in poorer areas and those serving children who travelled a considerable distance to school each day. In 1975, the scheme was made permanent and was rolled out across all schools where it was considered necessary to provide adequate nutrition to children (USDA, 2011).

To date, there is no specific definition of what constitutes a breakfast club as multiple breakfast club models exist. Typically, breakfast clubs aim to

provide children with a nutritious breakfast in a safe environment at the start of the school day, and some clubs also provide activities such as board games, crafts and sports for children to participate in. The way a breakfast club runs is generally dependent on the facilities available within school. Where facilities are restricted, breakfast clubs adopt a basic model serving a limited menu including foods such as cereal, toast, fruit and juices that require little preparation. Where more advanced facilities are available schools are able to provide a broader menu including cooked foods such as beans on toast and porridge. In some cases, a 'grab and go' style breakfast is provided where children are given a set breakfast to eat within their classroom at the start of the school day. The free school breakfast scheme recently implemented by Blackpool Council is an example of the 'grab and go' breakfast model where children are given a bread or cereal item, a fruit item and a drink of milk, water or fruit juice to consume in class at the start of the school day. Regardless of the type of model adopted, all school breakfast clubs are expected to adhere to given food standards that have been put in place to ensure children receive a breakfast meal that is nutritious. In England, at the time the research for the current thesis was being conducted, school breakfast clubs were governed by the 'Food Based Standards for All School Food Other than Lunches' (Children's Food Trust, 2007). These standards covered foods and drinks served in schools at any time other than lunch and so included breakfast in addition to break times and after school clubs. The standards encouraged the inclusion of nutritious food choices such as low sugar cereals and fruits, while higher sugar items such as chocolate and fizzy drinks were banned. Some items, such as meat

products, deep fried foods and table condiments were allowed in moderation but were subject to restrictions. For example, the standards stated that meat products such as sausages could be served provided they met a minimum level of meat content and could only be served once per fortnight across all meals served during the whole school day. These food based standards were recently reviewed as part of the recommendations set out within the School Food Plan (Dimbleby & Vincent, 2013) and new guidelines were announced in September 2014. The new food standards are designed to be easier to follow than the previous guidelines and contain more extensive information such as guidance on portion sizes and recipes.

Cost of attendance is another aspect of school breakfast provision that is variable. In the UK, numerous breakfast schemes exist with varying associated costs dependent on multiple factors including school size and staffing (Lucas, 2003). Some organisations provide support to schools (i.e. food, funding, staffing) allowing them to offer breakfast to children free of charge, but for schools to qualify for support they must meet certain criteria. For example, the Greggs Foundation provide food and start up funding for schools to set up free breakfast clubs. To qualify for funding schools must have more than 40% of children entitled to free school meals and must be willing to engage parent volunteers in the day-to-day running of breakfast club. In the USA, the cost of participation in the SBP is determined by family income. Children who reside in families classified as having an income at or below 130% of the federal poverty level receive free breakfast. Reduced price breakfast costing no more than 30 cents per day is offered to children from families whose income falls between 130% and 185% of the federal

poverty level. Finally, breakfast is provided at full cost, which is determined by individual schools, for children from families earning in excess of 185% of the federal poverty level.

It was recently estimated that the SBP provides breakfast to children in more than 85,000 school and childcare settings (Bartfeld & Ahn, 2011) though uptake of breakfast within these organisations is considerably low with only 17.1% of children actively participating in the SBP (School Nutrition Dietary Assessment Study 2004-2005 cited in Nanney et al, 2011). Prior research into American school breakfast programs has revealed similar low uptake figures. In a study by Murphy et al (1998), school breakfast participation data collected by school cafeteria staff from 3 schools (1 in Philadelphia and 2 in Baltimore) showed that only 15% of 1627 pupils consumed a breakfast provided by school each day. Little research has been carried out looking at participation rates in UK-based breakfast clubs, though in a recent survey of 3311 children and adolescents only 4% of those who reported having breakfast (n = 2847) had consumed it at a breakfast club (Hoyland et al., 2012).

Some of the reasons suggested for the low uptake of school breakfast include stigma associated with attendance and time constraints in the morning, particularly for those who travel a substantial distance to school (Bartfeld et al, 2009; Murphy et al, 1998; Dwyer, 1995). Research has shown that careful planning to overcome such barriers can lead to improved school breakfast uptake. For example, in the study by Murphy et al (1998), which was mentioned previously, an effort was made to remove some of the stigma associated with school breakfast participation by offering a universal

free school breakfast to all children instead of using means tested allocation of breakfast based on family income. In this particular study, offering a universal free breakfast across a four month period led to an almost two-fold increase in school breakfast participation. Across the three schools involved in the study, implementation of a universal free school breakfast scheme (i.e. breakfast offered to all children free of charge) was followed by a significant increase in school breakfast participation from 15% to 27%. A similar pattern of results was reported by Bernstein, McLaughlin, Crepinsek, Daft and Alexandria (2004) and Lent and Emerson (2007) who found increased participation in the school breakfast program when breakfast was offered free of charge to all pupils.

Despite the apparent low uptake of school breakfast reported in the US, since the development of the SBP, the provision of breakfast served on school premises has been increasingly encouraged in other countries across the world including Sweden, Canada and France with breakfast clubs becoming particularly common in UK schools (Harper et al, 2008). Recently, two well known restaurateurs, Henry Dimbleby and John Vincent, were commissioned by the UK Government to write the School Food Plan (SFP), which was released in the UK in April 2013. The overarching aim of the SFP is to implement a series of actions to “transform what children eat at school, and how they learn about food” (p. 8). Dimbleby and Vincent (2013) point out that a number of children in the UK arrive at school having consumed no breakfast, which they state has deleterious consequences on academic performance. In an effort to address the issue of breakfast skipping amongst those children most in need, the SFP includes an action to “set up financially

self-sufficient breakfast clubs [to] increase healthy breakfast provision for children who are arriving at school hungry” (p. 118). In response to this action the Department for Education has invested £3.15 million into the set up and evaluation of breakfast clubs in schools where at least 35% of children are entitled to free school meals. The London-based charity Magic Breakfast will work with schools and the Department for Education to implement breakfast clubs across the UK during the next two years.

### **1.3.1. Existing Research into School Breakfast Provision**

Numerous reasons for wider implementation of school breakfast schemes in general have been proposed, with aims to improve children’s health and nutritional status being of paramount importance (Blackpool Council, 2013). Other arguments such as a necessity for before school child care provision (Shemilt et al., 2004) and aims to improve school attendance and punctuality (North Lanarkshire Council, 2014) have been put forward in support of school breakfast clubs. Given the multitude of reasons asserted in support of maintaining breakfast clubs, much research has been conducted to attempt to ascertain whether participation in school breakfast does lead to beneficial outcomes for children and adolescents.

### **1.3.2 Breakfast Habits and Nutritional Status**

A key element of a breakfast club is the provision of a nutritious breakfast meal. The dietary habits and nutritional status of children who attend breakfast clubs have therefore received much research attention to determine whether a school served breakfast can be beneficial to children’s breakfast habits and nutritional outcomes.

In a cluster randomised controlled trial by Shemilt et al (2004) a diverse range of outcomes, including children's breakfast habits were measured across a 12-month period. Forty-three schools in "deprived areas across England" (p. 414) were invited to participate. Twenty-three schools (17 primary and 6 secondary) were randomised to the intervention condition where breakfast clubs were implemented in schools following the collection of baseline measures. Eighteen schools (10 primary and eight secondary) were allocated to the control condition where no breakfast clubs were to be implemented in schools until the end of the 12-month trial period. Two of the original 43 schools were excluded: one school was excluded as it was a special school and the second school intended to set up breakfast provision through a community association that catered to a number of schools in the area, which was different to the provision being set up in other treatment schools. Shemilt et al took a multitude of measures at baseline, three-months post intervention and 12-months post intervention to identify the effects of breakfast club attendance on various outcomes including health, cognition and behaviour. However, the study faced numerous problems with contamination across treatment arms. Local health authorities provided information on schools that did and did not have breakfast clubs already in existence but the research team found that some of the schools allocated to the control group already had breakfast clubs set up. Moreover, multiple schools did not comply with the study requirements so by the 12 month follow up point 77% of control schools and 72.2% of treatment schools had breakfast clubs running on the school site. This resulted in intention-to-treat analysis being conducted at first follow up (i.e. three months post

intervention) and observational analysis at second follow up (i.e. 12 months post intervention), which compared outcomes for children and adolescents who had attended breakfast club with those who never attended at all during the 12-month study period. Under the current section of the present thesis chapter only the findings relevant to breakfast habits will be discussed and the findings from other measures will be discussed at relevant points throughout the chapter. In order to look at children's breakfast habits Shemilt et al distributed a Life, Health and School Questionnaire, which was used to collect data directly from children and adolescents on demographic and socio-economic factors, health, eating habits, self-image, academic outcomes and relationships with family members and peers. At second follow-up, comparisons between primary school breakfast club attendees and non-attendees showed that more of those who attended breakfast club ate fruit for breakfast. Moreover, anecdotal evidence from parents suggested that since attending breakfast club their children were more willing to try new foods than they had been previously. The authors suggested that the potential for breakfast clubs to improve fruit consumption lends support to Government initiatives to increase fruit consumption amongst children.

More recently, Murphy et al (2010) conducted a 12-month cluster randomised controlled trial of a breakfast club intervention set up in primary schools across Wales. One-hundred-and-eleven schools opted to participate with 56 schools being allocated to the control condition and 55 schools assigned to the intervention. The study faced some similar issues to those reported by Shemilt et al (2004) though to a lesser extent with 10 of the intervention schools failing to implement a breakfast club and 5 of the control



schools setting up a breakfast club during the 12-month follow up period. Data were collected on children's eating habits at breakfast and throughout the day, their cognitive performance, classroom behaviour and attitudes towards breakfast at baseline (i.e. prior to the intervention of breakfast clubs) and again at 12-months follow up. Children's attitudes to breakfast were measured using a standardised questionnaire, which will be discussed in detail in Study 4 (Chapter 5) of the current thesis. Cognitive performance was measured using tests of memory, which were completed as a supervised class task and the Strengths and Difficulties Questionnaire (Goodman, 2001) was completed by children's teachers as a measure of their classroom behaviour. The findings relating to cognitive performance and behaviour will be discussed in subsequent sections of the current chapter. A validated dietary recall questionnaire was used to investigate children's food intake across two consecutive school days. The measure, based on the Day in the Life Questionnaire (Edmunds & Ziebland, 2002), required children to list all foods and drinks they consumed at given time points throughout the day. The foods and drinks that children consumed at breakfast were coded into healthy and unhealthy categories. The healthy category consisted of milk, fruit, bread and cereal products and the unhealthy category was made up of sweets and crisps. When comparisons were made between the breakfast habits of children in the intervention and control schools, results showed that children in the intervention schools consumed a greater number of healthy items for breakfast than children in the control schools but no differences were identified between schools for the number of unhealthy items consumed. Moreover, while there were no reported

changes in the rate of children skipping breakfast, parents of children in the intervention schools reported that their children had switched from consuming breakfast at home to having breakfast at school. Additionally, the implementation of breakfast clubs made no difference to children's healthy and unhealthy food consumption across the remainder of the day following breakfast. Following a similar pattern to the findings of Shemilt et al. (2004), the results of the study by Murphy et al. (2010) suggest that breakfast clubs have the potential to encourage children to adopt healthier food habits at breakfast. Murphy et al. (2010) concluded that breakfast clubs potentially offer a feasible way of addressing long term dietary outcomes as many food preferences and habits develop from primary school age.

Looking more specifically at children's nutrient intakes in relation to their breakfast club attendance, Simpson, Wattis, Crow and Summerbell (2003) administered one-day dietary recall measures to children and adolescents aged between 6 and 15 years to compare intakes of Vitamin C, Vitamin D, Protein, Calcium, Iron and Zinc between those who attended breakfast club and those who did not attend. Results of the study showed that a higher percentage of children who attended breakfast club had nutrient intakes above the recommended nutrient intakes for their age and sex.

Research by Belderson et al (2003) found conflicting results to those of Simpson et al (2003) showing that breakfast club attendance is not always advantageous to children's nutrient intake. One-hundred-and-eleven children and adolescents aged 9 - 15 years completed weighed food diaries on three school days. Breakfast club attendees and non-attendees were recruited from the same classes within three schools and were matched for

free school meal entitlement to account for socio-economic status. Results showed that children and adolescents who attended breakfast club reported greater intakes of fat and salt and lower intakes of carbohydrates than those who did not attend breakfast club. Belderson et al. suggested that the nutrient intake of breakfast club attendees might have been negatively affected by unhealthy breakfast options such as fried sausage sandwiches and tea being available in breakfast club.

Additional research focussing on children's breakfast habits has shown that breakfast club attendance can be detrimental to the frequency of children's breakfast intake. Waehrer (2008) used time-diary data obtained from 1521 children and adolescents (6 - 18 years old) from schools in the USA as part of the Child Development Supplement of the Panel Study of Income Dynamics. For the time-diary element of the study data were collected on breakfast habits and morning routines in addition to children's participation in the School Breakfast Program (SBP) on one school day and one weekend day. Time diaries were self-reported by children from the age of 9 years with help from caregivers if necessary. Caregivers completed time diaries for children aged less than 9 years. Results of the study showed that around 50% of children who attended the SBP skipped breakfast on the day of reporting during the school week. In comparison only around 20% of children who did not attend the SBP skipped breakfast in the school week. Conversely, children who attended the SBP reported higher rates of breakfast consumption at weekends than on week days and SBP non-attendees reported lower rates of breakfast consumption on a weekend compared to week days. Waehrer offers two potential explanations for these

differences. Firstly, SBP participants generally wake up and leave the house earlier than non-participants during the school week but non-participants are more likely to engage in travel on weekend mornings, which might result in non-attendees having more time for breakfast at home during the school week but not on weekends. Secondly, with regards to the breakfast habits of SBP attendees, Waehrer points out that caregivers might send their children to school believing that they will have breakfast but then the decision lies with the child on whether to have breakfast or not.

Overall the evidence surrounding the potential relationship between school breakfast provision on children's breakfast habits and nutrient intake remain inconclusive as findings have revealed a mixed pattern of benefit and detriment to dietary habits and nutritional outcomes.

### **1.3.3. Cognitive and academic performance**

According to Grantham-McGregor (2005) children's academic performance is influenced by school quality (e.g. allocated teaching time, facilities), familial factors (e.g. socio-economic status, parental attitude towards school) and characteristics of the individual child with health and nutritional status being of paramount importance. It has been proposed that hunger impedes a child's ability to pay attention to learning tasks (Winicki & Jemison, 2003) and breakfast clubs are often set up as a means of counteracting the detrimental effects of hunger on cognitive performance and subsequent learning.

Two UK-based cluster randomised controlled trials discussed previously (Shemilt et al., 2004; Murphy et al., 2010) considered children's cognitive performance amongst the multiple outcome measures included within their

studies. Shemilt et al (2004) adopted the Trail Making Test to measure children's concentration. The test requires children to connect a series of circles with continuous straight lines without drawing through any existing lines whilst being timed. Part A of the test is suitable for primary school children aged from 7 years old and Part B of the test is appropriate for secondary school aged children (11-16 years). Results showed that primary school children in intervention schools (i.e. schools with breakfast clubs) completed the Trail Making Test in a shorter time than children in control schools (i.e. schools with no breakfast clubs) suggesting that children in the intervention schools were better able to concentrate on the task than children in control schools. This effect was only evident at first follow up (i.e. 3-months post intervention); no differences between groups were identified at second follow up (i.e. 12-months post intervention). However, it should be noted that the problems this study encountered with contamination between the control and intervention groups might have contributed to the lack of significant differences between groups at second follow up.

In the later study conducted by Murphy et al (2010) children's episodic memory performance was measured to determine the effects of breakfast club attendance on cognition. The authors pointed out that episodic memory was chosen as it has shown "the most consistent effects of breakfast on cognition" (p. 221) in previous studies. Details of the tests used to measure episodic memory are not detailed in the published research paper; it is merely stated that "memory tests were also completed between 09.00 and 12.00 hours as supervised classroom exercises" (p. 221). The study identified no differences in episodic memory between intervention and

control schools at 12-months follow-up suggesting in this case that breakfast club attendance had no effect on cognitive performance.

However, research looking more directly at academic outcomes has found some promising results linking school breakfast participation to improvements in school grades. Murphy et al (1998) investigated the impact of introducing a free school breakfast program on school grades in schools where breakfast was already on offer to children but was not universally free. Prior to the study the participating schools offered breakfast to children using what Murphy et al described as “the conventional payment categories of free, reduced and full price meals” (p. 900), with the cost of breakfast to individual children being dependent on parental income. Maths, science, social studies and reading grades were collected for 133 children from the 4<sup>th</sup> and 5<sup>th</sup> grades (aged approximately 9 - 11 years) of 3 schools; 2 based in Baltimore and 1 in Philadelphia, USA. Grades were obtained from official school records prior to the implementation of a free school breakfast program then again once the program had been in place for 4 months. Baseline measures showed that children who participated in the school breakfast program often had better maths grades than children who took part sometimes or never. No differences between groups were identified for science, social studies and reading grades. At follow up the same pattern of results emerged with frequent school breakfast participation associated with higher maths grades. Moreover, children who increased their participation in school breakfast were more likely to demonstrate an improvement in maths grades than children who decreased their participation or took part at the same frequency across time. However, it is noteworthy that data on children’s rates of school

attendance and punctuality were also obtained from school records. These data showed lower rates of absence and tardiness (i.e. poor punctuality) amongst children who attended school breakfast often compared to those who attended sometimes or never at baseline, though these differences were not statistically significant. At follow up children who participated in school breakfast sometimes or often had superior rates of attendance and punctuality compared to children who never took part in school breakfast. Furthermore, increased rates of school breakfast participation across time were associated with improvements in attendance and punctuality. So, while it is promising that school breakfast participation was found to be associated with improvements in maths grades, it is important to consider the possibility that improvements in attendance and punctuality probably led to children spending more time in class, which consequently resulted in access to more teaching time leading to improved academic performance. Though the authors acknowledge this possibility, they argue that the distinction is irrelevant in terms of educational policy because any significant improvement in maths grades regardless of how it occurs is noteworthy.

In a recent review of the literature including 10 studies on school breakfast and academic performance, Adolphus, Lawton and Dye (2013) highlighted a positive association between school breakfast participation and improvements in maths grades. Yet, they pointed out that an increase in school attendance was also reported in many studies making it difficult to determine whether school grades improved as a result of breakfast provision or increased instructional time in school. This issue was also discussed in an earlier review carried out by Hoyland, Dye and Lawton (2009) who

suggested that improvements in academic performance following school breakfast attendance might be a result of improved school attendance rather than school breakfast provision.

Overall, research presented thus far demonstrates the existence of a positive relationship between school breakfast participation and improvements in school grades. While these findings have important implications for educational policy relating to strategies for academic improvement, it is not possible within the school environment to determine cause and effect as there are many strategies in place to drive increases in school grades throughout the school year.

#### **1.3.4. Behaviour**

The promotion of positive behaviour is often cited as a reason for the implementation of breakfast clubs in schools. However, the scientific research on the impact of breakfast club attendance on children's behaviour is mixed. The studies by Shemilt et al (2004) and Murphy et al (2010) discussed previously both investigated children's behaviour in relation to breakfast club attendance. Both studies utilised the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001), which is a measure of children's behaviour categorised under 5 subscales: hyperactivity/inattention (e.g. Restless, overactive, cannot stay still for long); conduct problems (e.g. Often has temper tantrums or hot tempers); emotional symptoms (e.g. Many worries, often seems worried); peer relationship problems (e.g. Rather solitary, tends to play alone) and pro-social behaviour (e.g. Shares readily with other children). The questionnaire consists of 25 statements rated on a 3 point scale: 0) Not True; 1) Somewhat True; 2) Certainly True. In the study



by Shemilt et al teachers completed the SDQ for children of primary school age (4 - 11 years) whilst secondary school pupils completed a self report version of the scale designed for 11 - 16 year olds. At second follow up, which occurred 12-months after the implementation of breakfast clubs, observational analysis comparing children and adolescents who had attended breakfast club with those who had never attended breakfast club across the study duration showed that more primary school breakfast club attendees than non-attendees had borderline or abnormal conduct, hyperactivity and total difficulties scores (i.e. sum of 5 subscales). For secondary school pupils, more breakfast club attendees than non-attendees reported borderline or abnormal pro-social scores. In relation to these findings Shemilt et al reported that researchers had observed incidents of boisterous behaviour in breakfast clubs and teachers had discussed issues with regards to children arriving to class full of energy and being difficult to settle at the start of the school day. Shemilt et al noted that a lack of authoritative supervision might have contributed to poor behaviour in some breakfast clubs.

In the study conducted by Murphy et al (2010) the Strengths and Difficulties Questionnaire (Goodman, 2001) was completed by the class teachers of a random subsample of 10 children from each of the 111 participating schools. The questionnaires were completed at baseline then again at 12-months follow up. Results of the investigation showed no difference between school breakfast attendees and non-attendees in terms of behaviour reported through the Strengths and Difficulties Questionnaire.

Although the same questionnaire was used in the studies by Shemilt et al (2004) and Murphy et al (2010) there is a lack of consistency across these studies as the questionnaire was completed by parents and secondary school pupils in the Shemilt et al study and by class teachers in the Murphy et al study. What is more, it is questionable whether a questionnaire measure is the most accurate means of obtaining information on children's behaviour. Adolphus et al (2013) argued that behavioural measures are prone to issues with subjectivity and "there is a lack of studies that use systematic, validated and reliable coding systems to measure classroom behaviour" (p. 23). These factors make comparisons between studies very difficult resulting in a precarious evidence base relating to children's breakfast club attendance and subsequent behaviour.

In an early study where observational methods were utilised, a positive relationship between school breakfast participation and classroom behaviour was reported. Bro, Shank, Williams & McLaughlin (1994) used a momentary time sampling method to investigate the behaviour of high school students in a vocational welding class. Ten males were observed by their class teacher following the consumption of breakfast in class and following no school breakfast using an ABAB design across a 4-week period. The class teacher scanned the classroom at 5-minute intervals and recorded whether students were on task. An interval was only marked as on-task if all students were engaged in an appropriate class activity. Results showed that students were more likely to be on task following consumption of school breakfast. During the same study period a second class of 14 students was also offered school breakfast. While this class were not involved in formal observations carried

out as part of the study, their class teacher anecdotally reported that time spent off-task by students had increased but the amount of work completed had also increased.

Findings from studies investigating the relationship between breakfast club attendance and behaviour are scarce and offer mixed results. Furthermore, no studies to date have investigated children's behaviour within the breakfast club setting despite Shemilt et al (2004) suggesting that poor behaviour in the classroom might ensue at the start of the school day as a result of a lack of supervision and boisterous activities being permissible within breakfast clubs. Thus further studies into breakfast clubs and behaviour are warranted.

#### **1.3.5. Wider social aspects**

As mentioned previously the main, consistent feature across all breakfast clubs is the provision of a breakfast meal in school at the start of the school day. The nutritional composition of this breakfast is often the focus of investigations with researchers looking at how a school provided breakfast can influence outcomes such as health, dietary habits and behaviour.

However, the potential social advantages afforded to children through participation in school breakfast have received very little attention. This is surprising given that research into family mealtimes has shown that the ritual of regularly eating with others can be beneficial to familial relationships (Fulkerson et al, 2006). Mealtimes help to facilitate interactions between individuals (Cason, 2006) and offer opportunities to teach children appropriate social skills (Eisenberg et al., 2004). An additional key feature of many breakfast clubs is the provision of activities that offer children

opportunities to engage in play with peers before the start of the school day. Play is a crucial component of child development. From a socio-developmental perspective, play is important as it helps children to learn appropriate social behaviours including perspective taking (Pellegrini, 2002), conflict resolution and negotiation (Rubin et al., 1983). Given this background such a lack of research into school breakfast provision and social relationships is unexpected.

A small study by Watson and Marr (2003) highlighted the value of breakfast clubs for the social relationships of children with emotional and behavioural difficulties. This study is discussed in detail in Chapter 2 of the current thesis but briefly a breakfast club was set up in a special school with the aim of improving children's behaviour and social skills. While the study reported few effects of breakfast club attendance on children's behaviour, it was noted that the breakfast club had a discernible effect on children's ability to get along with one another. Furthermore, in a report by Donovan and Street (1999) it is suggested that breakfast clubs might lead to "better socialisation between pupils of different ages" and "improved staff-pupil relationships" (p. 5) but these important social factors have received scant consideration thus it could be argued that investigations looking at the potential relationship between breakfast club attendance and social outcomes are warranted.

### **1.3.6. Methodological Considerations**

A major criticism of existing research into school breakfast clubs is that it lacks scientific rigour owing to a reliance on subjective teacher reports, exclusion of appropriate control groups and failure to take baseline measures before breakfast clubs are implemented (Ani & Grantham-McGregor, 1999).

While randomised controlled trials address these issues and are recognised as the gold standard of research methodologies for investigating the impact of interventions (Moore & Moore, 2011), their use within schools is complex and potentially unethical. Murphy et al. (1998) pointed out that the use of randomised controlled trials to investigate school breakfast clubs would result in some children being denied access to breakfast at school while it is offered to others within the same school, which Murphy et al. argued would be unethical. Cluster randomised controlled trials deal with this issue by randomising schools rather than individuals to conditions but matching schools appropriately on relevant variables is difficult (Defeyter, Graham, Walton & Apicella, 2010). Moreover, in previous studies where cluster randomised controlled trials have been utilised, problems have arisen with contamination occurring between treatment arms (Shemilt et al., 2004; S. Murphy et al., 2010). Additionally, Murphy (2014) argued that the implementation of randomised controlled trials for evaluating any kind of intervention is challenging as there is an element of risk involved for policymakers and organisations that have often invested a substantial amount of time and money into setting up an intervention and therefore have a vested interest in the intervention being successful.

Longitudinal studies are another advantageous method of investigating the impact of interventions as they allow consideration of changes in specific outcomes across a pre-determined time period. However, across the research literature considering the impact of out of school club participation (i.e. clubs that run before or after school) on different outcomes for children and adolescents there are a lack of longitudinal investigations (The Scottish

Executive, 2003). What is more, there are calls within the research literature for more longitudinal investigations looking at the development of children's social relationships in out of school club settings (Poulin & Denault, 2013).

#### **1.4. The Current Thesis**

The literature reviewed within the current chapter has revealed that investigations into UK breakfast provision are scarce. Furthermore, where studies have been conducted, reported findings are mixed particularly with regards to the impact of breakfast club attendance on children's breakfast habits, social relationships and behaviour. The current thesis aims to make a unique contribution to the research literature by investigating whether an association exists between school breakfast club attendance and children's relationships and behaviour, looking specifically at children's relationships with peers, parents and school staff and considering their behaviour within the breakfast club setting and their breakfast consumption habits.

Additionally, studies will attempt, as far as possible, to address some of the methodological shortcomings that have been raised in previous studies.

## **CHAPTER 2: What are the advantages and disadvantages of school breakfast clubs according to parents, school staff and children?**

### **2.1. Introduction**

As discussed in Chapter 1 the provision of breakfast in schools has become more popular in recent years, particularly in the UK (Harper, Wood & Mitchell, 2008). Despite its availability, the uptake of school breakfast remains considerably low in comparison to school lunches (Bailey-Davis et al., 2013) even though the high prevalence of breakfast skipping amongst children and young people suggests that there is a need for breakfast provision in schools (Association of Teachers and Lecturers, 2013).

In a recent UK-based survey conducted by Hoyland et al (2012), 3311 children and adolescents aged 5 - 15 years reported on their breakfast habits. Data were collected from children and adolescents aged 7 - 15 years through an online questionnaire, which asked them about their breakfast consumption patterns on the day of the survey and their habitual breakfast habits. The survey also asked children and adolescents to provide reasons for skipping breakfast if this was applicable to them. The same information was collected from children aged 5 - 6 years but this was gathered through face-to-face interviews so that the researchers could ensure that children understood the questions being asked. The results of the survey showed that on average 14% of children and adolescents skipped breakfast on the day of reporting. Of those who consumed breakfast, only 4% reported having breakfast at breakfast club. Hoyland et al therefore suggested that breakfast club attendance was likely to be 'low and variable' (p. 238)

amongst the children and adolescents surveyed given that 54% of 1498 schools in England, who provided data through the National Foundation for Educational Research omnibus (2011), reported that a breakfast club was available in their school. Further, when considering the reasons given for skipping breakfast, Hoyland et al found that lack of time, absence of hunger and an established habit of skipping breakfast were commonly cited barriers to breakfast consumption. It was suggested that breakfast clubs have the potential to help children to overcome barriers to breakfast consumption but Hoyland et al concluded that research is required to 'better understand drivers of attendance and to establish effective interventions to improve attendance and encourage the breakfast habit at breakfast clubs' (p. 239).

In an earlier review of the literature on school breakfast programs in the USA, Brown, Beardslee and Prothrow-Stith (2008) suggested that school breakfast attendance figures are highly dependent on the way a program is organised and promoted, and barriers to attendance can negatively affect school breakfast uptake. For example, the authors argued that many children from low income families, who are most in need of school breakfast, will not utilise the provision when eligibility for free breakfast is means tested as they do not want to be stigmatised as being poor.

More recently, Olsta (2013) reported on the outcomes of a program that was implemented to increase breakfast uptake in a large high school in the USA. Prior to the start of the program, an opportunity sample of 1405 adolescents from school grades 9 through to 12 (aged 14 - 17 years) completed a needs assessment survey about their breakfast consumption habits and perceived barriers to breakfast. At this point adolescents could obtain breakfast at the



school canteen for 45 minutes before the start of the school day and on average 80 breakfasts were served per day. Through the needs assessment survey Olsta found that 63% of adolescents skipped breakfast on at least one day during the week and 18% of adolescents never ate breakfast. In terms of the reasons reported for skipping breakfast, 61% of adolescents said that they lacked time to eat breakfast in the morning and 32% said that they were not hungry in the morning before school. Other barriers to breakfast identified by adolescents were the high cost of school food, the prohibition of eating food in the classroom and lack of available food after the start of the school day. In an effort to increase school breakfast uptake and to counteract the barriers to breakfast consumption identified by adolescents, the availability of school breakfast was extended so that adolescents could obtain breakfast foods from the canteen and from a mobile breakfast trolley to eat in class after the start of the school day. Olsta reported a 400% increase in school breakfast uptake following the implementation of extended school breakfast availability. Moreover, a second survey showed an 8.7% decrease in the proportion of adolescents who reported skipping breakfast on at least one day per week. Unfortunately, the pre- and post-program surveys were not completed by the same adolescents so it was not possible to determine whether addressing barriers to breakfast led to a change in breakfast habits. However, Olsta concluded that the four fold increase in school breakfast uptake was evidence that adolescents will utilise school breakfast when it is adapted to meet their needs.

Similarly, an earlier study conducted by Lent and Emerson (2007) also showed that school breakfast uptake increases when barriers to participation

are addressed. Fifty-one principles representing 54 Milwaukee Public Schools were surveyed about the School Breakfast Program. When questioned about the barriers to school breakfast participation for children in their schools, principles suggested that many students missed breakfast as they arrived too late to have breakfast at school, those who were not entitled to free breakfast often lacked money to pay for it and there was a social stigma associated with attending school breakfast. When the organisation of school breakfast was altered so that all children could collect a free breakfast from the school canteen at the start of the school day to consume in class, school breakfast participation increased by 240% in one year. The significant increase in school breakfast participation was attributed to the change from a traditional, means-tested breakfast program that was available before the start of the school day to a universally free breakfast that could be eaten in the classroom at the start of the school day. The conclusion drawn by Lent and Emerson (2007) mirrors that of Olista (2013) to suggest that when efforts are made to eliminate the perceived barriers to school breakfast, participation improves significantly.

It is evident from those studies conducted in the USA that the views of key stakeholders and users of breakfast clubs are important in allowing breakfast program organisers to address barriers to participation and consequently improve school breakfast participation rates. However, few studies have considered the views of parents, children and school staff in the UK despite these groups being involved in breakfast clubs on a regular basis and the uptake of school breakfast in the UK being relatively low compared to the availability of breakfast clubs (Hoyland et al., 2012).

As part of a large scale evaluation of a Department of Health pilot scheme, which was implemented in 1999 to increase breakfast club provision in England, Shemilt et al. (2003) distributed questionnaires and conducted interviews with parents to find out about family views and experiences of breakfast clubs. They also gauged children's views through a number of breakfast club case studies. Shemilt et al. reported that breakfast clubs encouraged children to eat breakfast, reduced stress amongst families in the morning, supported parents in seeking and accessing work or training and provided a reliable means of child care. Although this study was useful in identifying the impact of breakfast clubs on families, the paper mainly presented the views of parents with very few references made to children's opinions. It was also unclear from the paper exactly what information children were asked to provide and limited information was given on how children's views were obtained; the authors specified "Interviews [with parents] were informed by case studies of the breakfast clubs concerned, which presented opportunities for the children themselves to express their own views and experiences" (p. 103). This lack of detail is surprising given the authors' acknowledgement of the importance of discerning children's views on breakfast clubs to inform development of future school breakfast provision. Moreover, although the authors assert that a purposeful sample was selected to include families representing a range of backgrounds, limited demographic information is provided on participating parents, schools and breakfast clubs making it difficult to understand the context to which the findings apply.

In a more recent study by Stevens, Oldfield, Wood and Nelson (2008) staff from 22 schools in London were recruited to provide views on school breakfast clubs. Thirteen of the schools had been running a breakfast club for between 1 and 5 years and 9 schools acted as control schools as they had never provided a breakfast club. Results showed that breakfast clubs were thought to be advantageous in improving children's health, social skills, punctuality, and concentration levels. Breakfast clubs were also thought to help forge closer links between parents, children and school staff. However, despite the apparent benefits of breakfast clubs, schools expressed some concerns surrounding the provision of breakfast clubs including a lack of suitable breakfast club facilities, schools taking on parental responsibilities and unstable funding sources.

Although the findings from this investigation may be useful to schools considering setting up a breakfast club, an aim of the study was to determine the benefits of breakfast clubs to pupils and the school community but only the views of school staff were represented thus presenting a one-sided view of breakfast clubs. Moreover, it is unclear from the report written by Stevens et al which members of school staff took part in the in-depth interviews. This information may be vital as a staff member's level of involvement in the breakfast club or in school management decisions could have a bearing on the views expressed about breakfast clubs in the interviews. For example, when weighing up the benefits of a breakfast club a school head teacher might prioritise issues such as staffing and financial impacts on school budgets whereas a teaching assistant responsible for the day to day running

of the club might be more focussed on the provision of nutritious food and activities for children to participate in.

In another UK-based study, Watson and Marr (2003) reported on the views of pupils and teachers regarding a breakfast club that was set up in a Scottish school for 17 pupils with emotional and behavioural difficulties. The breakfast club was set up with the aim of encouraging children to eat breakfast as they frequently skipped breakfast at home and those children taking medication for attention deficit hyperactivity disorder often suffered from suppressed appetite as a side effect of their medication. Further, it was hoped that the provision of a breakfast club would lead to improvements in children's behaviour and social skills.

The findings of the study showed that children expressed mixed views about the breakfast club. The majority of children believed that breakfast club attendance had no impact on their school work or behaviour in the classroom while "roughly a third" (p. 16) of children said that their work and behaviour had improved as a result of attending breakfast club. Teachers generally believed that the breakfast club had no effect on children's work and behaviour. Moreover, two teachers expressed concerns that breakfast club attendance resulted in children being late to class and one teacher believed that the breakfast club was not being accessed by the children who were most in need of the provision. Despite the apparent disadvantages identified by children and teachers, both groups conveyed the value of the pleasant social environment that was evident within the breakfast club. Children enjoyed seeing their friends before school and teachers felt that the calm atmosphere in the breakfast club put children in a positive mood to start the

school day. Watson and Marr emphasised the importance of the social environment offered by breakfast club for children with emotional and behavioural difficulties as these children often find social situations challenging so the opportunity to practice social skills in breakfast club is invaluable. However, the investigation was only conducted on a very small scale and as in previous UK studies that have investigated the impact of school breakfast clubs through qualitative analysis, no demographic information about participants was provided so it is not possible to discern the ages of children or responsibilities of staff members who gave their views on the breakfast club.

In sum, it is evident that the views of children, parents and school staff are important in understanding, developing and maintaining school breakfast clubs so that they continually meet the needs of key stakeholders and users. Although the views of children, parents and school staff have been represented in a small number of UK studies, no published research papers to date have presented a fully triangulated view of UK breakfast clubs as the opinions of these key stakeholders and users have not been considered within a single study.

The overarching aim of the first study presented in this thesis is therefore to present the views of children, parents and school staff on school breakfast clubs by addressing the research question: What are the advantages and disadvantages of school breakfast clubs according to parents, school staff and children? The study will be presented in two parts: Study 1a will consider the views of parents, school staff and children in relation to school-led breakfast clubs that are situated within schools in the North East of

England. The breakfast clubs within these schools have been set up to suit the needs of the individual schools; they take place before the start of the formal school day and are overseen by individual school head teachers who work in collaboration with school staff who organise the day to day running of the breakfast clubs. Study 1b will present the views of parents, school staff and children on a school breakfast scheme, which was implemented in primary schools in the North West of England by the Local Authority.

Through this scheme all primary school children are offered a free breakfast within their usual classroom or in the school hall at the start of the school day. The scheme is managed by the Local Authority and head teachers are given a limited number of options by the Local Authority on how the scheme should be implemented within their school.

The current study will offer a unique contribution to the research literature pertaining to school breakfast clubs in three ways. Firstly, only a limited number of studies have investigated school breakfast provision in the UK. The current study will address this gap in the literature by providing an insight into school breakfast clubs across the North East and North West of England, UK. Secondly, the present study will enable comparisons to be made between two different breakfast club models: 1) individual school-led clubs and 2) Local Authority led clubs. Such comparisons have not been made within the available research literature on breakfast clubs and will allow some investigation into which model is most effective. Finally, no studies to date have investigated what parents, school staff and children perceive to be the advantages and disadvantages of different breakfast club models in the UK. The views of these key groups will therefore be presented.

## **2.2. Study 1a**

### **2.2.1. Method**

#### **2.2.1.1. Approach**

A qualitative, semi-structured interview approach was used to gather the views of parents and school staff on primary school breakfast clubs. This approach was deemed appropriate for collecting information from parents and school staff for a number of reasons. Firstly, there are currently no standardised questionnaires available on the topic of breakfast clubs and previous studies in a variety of research areas have shown that questionnaire response rates are often low, particularly from low income parents (e.g. Carnell et al., 2005). The semi-structured interview approach offered flexibility so participants were able to opt to be interviewed at a time most appropriate to them during the day. Furthermore, interviews were considered more suitable than focus groups in this instance as the nature of the topic under investigation could have led to parents and staff being critical of certain school procedures, management decisions and parental care practices so it was important that participants were able to freely express their views without the risk of being reprimanded or criticised by fellow participants.

Children took part in small focus groups consisting of two or three children of similar age. Small focus groups are deemed a relevant method of collecting qualitative information from children as they are similar to small group discussions that children are involved in as part of their normal classroom work (Fielden, Sillence & Little, 2011).



#### **2.2.1.2. Participants**

Participants were recruited from four primary schools based in the North East of England. The characteristics of the schools and the areas that the schools resided in are presented in Table 2.1. The areas that the schools were in were predominantly White British, populated by a higher proportion of White British citizens than proportions reported for the North East of England (93.6%) and the whole of England (79.8%). Similarly, the areas had a high proportion of people of working age claiming key benefits such as Job Seekers Allowance compared to proportions for the whole of England (15%). Three of the areas also had a higher proportion of key benefits claimants than the proportion reported for the North East of England (20%).

All schools had an established breakfast club running on their school site and participants were purposefully sampled as they were all familiar with their school breakfast club. The characteristics of the four school breakfast clubs are presented in Table 2.2.

**Table 2.1:** Characteristics of participating schools and school areas in Study 1a.

School	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1a	262	Voluntary Aided	4.2%	7.4%	21%	22%	97.9%
2a	287	Community	9.8%	0%	41.4%	34%	97.9%
3a	228	Voluntary Aided	10.5%	2.4%	58.7%	37%	94.9%
4a	285	Community	2.1%	1.7%	18.2%	19%	98.0%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

**Table 2.2:** Characteristics of breakfast clubs in Study 1a.

School	Cost	Activities	Breakfast	Led by	Availability	Duration
1a	£2.00 per day	Ball games, skipping, toys, drawing	Cereal, toast, pancakes, juice, fruit	Teaching Assistant and Lunchtime Supervisor	Mon-Fri 8.00am-8.50am Term time only	6 years
2a	£1.50 per day	Table top activities, reading, toys	Cereal, toast, yogurt, fruit, juice	Social Inclusion Assistant and Teaching Assistant	Mon-Fri 8.00am-8.30am Term time only	10 years
3a	Free (Gregg's funded)	Arts and crafts, board games, reading	Cereal, toast, yogurt, juice	Teaching Assistants and Parent Volunteers	Mon-Fri 8.00am-8.55am Term time only	17 years
4a	£2.50 (for 7.30am arrival)  £2.00 (for 8.15am arrival)	Drawing and colouring, construction, television, books, board games, physical activity games	Cereal, yogurt, toast, fruit, juice	Teaching Assistants	Mon-Fri 7.30am-8.55am Term time only	7 years

Fourteen female, White-British, parents from the four participating schools opted to take part in the current study. All participating parents had at least one child attending a school breakfast club at the time the interviews took place. Four of the parents interviewed were also volunteers in their children's school breakfast club and one parent attended breakfast club with her children. Volunteers helped school staff with the serving of foods and drinks and clearing away after breakfast. A summary of the demographic information collected from participating parents is presented in Table 2.3.

**Table 2.3:** Summary of parent demographics from Study 1a (n=14).

Demographics	Response Options	Number of Parents
Age Range	26 - 35 years	7
	Above 35 years	7
Marital Status	Married	6
	Living with Partner	5
	Single	1
	Separated	1
	Divorced	1
Employment Status	Full time employment	2
	Part time employment	6
	Self employed	1
	Voluntary work	2
	Unemployed	3
Number of Dependent Children	1 child	5
	2 children	3
	3 children	2
	4 children	1
	5 children	2
	6 children	1

Seventeen members of school staff from three of the participating schools were interviewed for the current study. No staff members from the fourth school were available to participate at the time the interviews took place. School staff were all White British and were purposefully sampled as they all had some understanding of their school breakfast club and were able to express opinions on it. Five staff members: three teaching assistants, one lunch time supervisor and one social inclusion officer were involved in the day to day running of the breakfast club at the time the interviews took place. The head teacher and the trainee teacher had been involved in the initial set up of breakfast clubs within their schools. The remaining staff members, who did not work in breakfast club and were not involved in its set up, all worked directly with children who attended breakfast club within their classes on a daily basis. Table 2.4 presents a summary of the demographic information collected from the school staff who participated in the research.

Ten male and eleven female children, aged between 4 years 8 months and 11 years 1 month (mean age = 7:9) were recruited from the four participating primary schools. Breakfast club staff confirmed that all participating children had attended their school breakfast club consistently during the three weeks prior to taking part in the focus groups.

**Table 2.4:** Summary of school staff demographics from Study 1a (n=17).

Demographics	Response Options	Number of Staff
Sex	Male	2
	Female	15
Age Range	26 - 35 years	5
	Above 35 years	12
Current Position in School	Head Teacher	1
	Class Teacher	6
	Trainee Teacher	1
	Teaching Assistants	6
	Healthy Schools Co-ordinator	1
	Social Inclusion Assistant	1
	Lunchtime Supervisor	1
Years Spent Working in Education	Less than 5 years	1
	5 - 10 years	8
	11 - 15 years	3
	21+ years	5

### **2.2.1.3. Materials**

Participant information sheets and opt-in consent forms were devised for parents, school staff and children (see Appendix A for examples). Unique information sheets and consent forms were constructed to ensure that they were written in an accessible manner for each participant group.

Demographic questionnaires were also developed in order to collect relevant information such as age, ethnicity and current employment status from parents and school staff (see Appendix B).

Three separate schedules of open-ended questions were developed for use with parents, school staff and children. Although the questions differed

slightly between schedules to ensure that they were appropriate for the group being questioned, each schedule was designed to determine advantages and disadvantages of school breakfast clubs (see Appendix C). A digital Dictaphone was used to record all interviews and focus groups to allow subsequent transcription to be conducted.

#### **2.2.1.4. Procedure**

##### **2.2.1.4.1. Adults**

Following ethical approval from the Faculty of Health and Life Sciences Ethics Committee at Northumbria University, research information and opt-in consent forms were distributed to parents of children who attended school breakfast club and to relevant school staff i.e. those who were familiar with their school breakfast club. Individual interviews were subsequently arranged with all parents and school staff who returned forms to opt to take part in the study and gave consent for their voices to be recorded during interviews. Interviews were arranged to take place on school premises at a time most appropriate to each individual participant and their school.

On arriving for their interviews adults were given a brief introduction to the research through which the interviewer explained that the aim of the research was to find out parents', pupils' and school staff views on breakfast clubs. Adults were also informed of their right to fully withdraw from the interview at any time and their freedom to refrain from answering any questions that they did not want to answer. Adults were assured that all information they provided would remain confidential and any identifying information mentioned during the interview would be removed during the

transcription process. Before recording began, adults were asked whether they were still happy to be recorded and were told that they should feel free to ask questions if there was anything they were unsure about during the interview. No adults opted out of the study at this stage.

An interview schedule consisting of eight open-ended questions for parents and nine open-ended questions for school staff was used to guide the discussion between the participant and the interviewer. The questions focussed on the reasons for children's attendance at breakfast club, potential positive and negative factors associated with breakfast club and the changes that would occur if breakfast club was to close.

Adults could talk freely about each issue that was introduced through questions asked by the interviewer. Adults were also encouraged to expand on any relevant points that were briefly mentioned through prompts from the interviewer such as *"You mentioned... can you tell me more about that...?"* Interviews ended once all topics of interest had been exhausted and the adult felt that they had nothing more to add to the discussion. Adults were then verbally debriefed and provided with written debrief information that contained the researchers contact details so that adults could get in touch if they had any questions about the project after the day of their interview or decided to withdraw their data from the study (see Appendix D for an example).

#### **2.2.1.4.2. Children**

Children who returned signed consent forms from their parents or carers were invited to join focus groups that took place in a quiet area of their



school at a convenient time during the school day. On arrival, a simple information sheet was read out to children explaining what they would be asked to do. Children then completed a consent form by circling 'yes' or 'no' to state whether or not they would like to take part in the focus group. One child chose to go back to their classroom at this stage before the focus group began. This child's details have not been included in the sample characteristics detailed in the participants section.

Seven open-ended questions were used to guide the focus group discussions. The questions focussed around what children enjoyed about attending breakfast club, things that could be done to improve breakfast club and the potential consequences of breakfast club closure. Children were encouraged to talk freely about their breakfast club and they were encouraged to expand on any relevant points that required more detail through prompts from the interviewer. Focus groups ended once children had no more information about breakfast clubs to add to the discussion. Children were then verbally debriefed and provided with written debrief information to take home for their parent or carer to provide them with details of the project and to give them the opportunity to contact the researcher with any questions or to withdraw their child's data from the study if necessary (see Appendix D for an example). Children were also given a sticker and a certificate as a token of appreciation for their contribution to the research.

All discussions with parents, school staff and pupils were recorded for subsequent transcription. An example transcript from each participant group is included in Appendix E.

#### **2.2.1.5. Coding and Analyses**

Data were coded and analysed following the guidelines on thematic analysis outlined by Braun and Clarke (2006). Each individual recording was listened to in its entirety to ensure familiarisation before being orthographically transcribed to capture the content of discussions with parents, school staff and children. Each transcript was read numerous times then pertinent points thought to refer to any advantages and disadvantages of breakfast clubs were highlighted. NVivo version 10.0 software was used for storage of highlighted quotes and further categorisation. The highlighted quotes were given labels to summarise the topics they referred to and similar topics were grouped together. Quotes were originally grouped separately for parents, children and school staff but further reading of the quotes revealed many similarities between the topics discussed by parents, children and school staff so quotes from all were grouped under the same topic headings where relevant. Main themes and subthemes were developed from the topic groups and appropriate theme and subtheme headings were generated to summarise the data being presented.

This inductive approach to thematic analysis was adopted as there is currently no published theoretical framework on breakfast clubs on which the current analysis could have been based. Additionally, Burnard et al (2008) suggested that qualitative research can be presented with findings followed by a discussion section or alternatively the findings and discussion sections can be combined. Given the broad scope of the topics covered within the current study, the findings presented under each theme are accompanied by a brief discussion, which offers some interpretation of the theme, links to

relevant research and theories and directions for further investigation where applicable. Finally, in their guidelines for publication of qualitative research Elliott, Fischer and Rennie (1999) argued that researchers should determine the reliability of their analysis by having another person clarify the accuracy of the themes identified within their data. This was deemed necessary within the current investigation given that the highlighted themes were not based on an existing theoretical framework and relied on the researchers' interpretations of the data.

#### **2.2.1.6. Reliability Analyses**

To confirm that transcription and analysis were accurate a second coder analysed around 10% of the data in line with recommendations set out in the research literature (Mounter & Noordegraaf, 2012). The second coder confirmed that there was 100% agreement between the audio recordings and the corresponding transcripts. There was also moderate agreement (Cohen's Kappa = .572;  $p < .001$ ) between the first and second coders' interpretation of the transcripts upon initial coding. Subsequent discussions between the first and second coder revealed that there were some quotes that initially appeared to fit under two themes, as is often the case when conducting thematic analysis (Braun & Clark, 2006), thus further discussions between the first and second coder were required before a final code could be decided upon for some quotes. An outline of initial coder interpretations, coding discrepancies and coding resolutions are provided in Appendix G. Following clarification discussions, agreement between the first and second coder was found to be very good (Cohen's Kappa = .905;  $p < .001$ ). Additionally, the second coder confirmed that there were no additional

themes emerging from the data that were missed in the first coder's interpretation.

## **2.2.2. Findings**

The themes and subthemes pertaining to the the advantages and disadvantages of breakfast clubs highlighted by parents, children and staff are presented in the following sections. Example quotes to support each subtheme have been included in Appendix F.

### **2.2.2.1. Advantages of Breakfast Clubs**

#### **2.2.2.1.1. Advantage Theme 1: Social Opportunities**

The theme of Social Opportunities pertains to accounts of the time that children spend with peers and adults in breakfast clubs and the benefits that are linked to these social interactions. The positive social opportunities provided by breakfast clubs were discussed by parents, children and school staff.

##### ***Advantage Subtheme 1a: Time for Informal Interaction***

Breakfast clubs were thought to be advantageous in allowing children to interact with peers in an informal setting before the start of the school day. References were made to children being able to play freely and chat with friends in breakfast clubs before beginning the formal school day.

##### ***Advantage Subtheme 1b: Socialising Across Groups***

The opportunity that breakfast clubs offered children to spend time with peers outside of their usual peer group was described under the subtheme of Socialising Across Groups. Parents, children and staff talked about how

breakfast clubs allowed children to interact and make friends with peers from other year groups across their school. Additionally, in one school, children were offered a unique opportunity to spend time with peers from a different school within their breakfast club, which was made available to two primary schools within one local area.

### ***Advantage Subtheme 1c: Helps Overcome Social Limitations***

The ways that breakfast clubs helped children to overcome social limitations were discussed by parents and school staff. In some cases, parents suggested that their children were limited in their opportunities outside of school to spend time with other children either because they had no siblings or lacked available play space to meet up with friends. Breakfast club attendance was viewed as a way of helping children to overcome such limitations. Furthermore, some parents discussed how their children found social situations difficult but the social opportunities that children encountered in breakfast clubs helped them to deal efficiently with social challenges.

School staff also commented on how breakfast clubs can help children to overcome different barriers that might hinder their chances to socialise with others outside of the school day. Such obstacles mentioned by staff included shyness, being an only child and eating breakfast alone while parents prepare for the day.

### ***Advantage Subtheme 1d: Relationship Development***

Finally, with regards to social opportunities, school staff and children talked about the way in which breakfast clubs offered children the opportunity to develop positive relationships with peers and school staff.

#### **2.2.2.1.2. Brief Discussion of Advantage Theme 1: Social Opportunities**

It was evident through discussions with parents, school staff and children that breakfast clubs offered children a unique opportunity to spend time with peers and staff before the start of the school day. The social opportunities afforded to children through breakfast clubs are unique for a number of reasons. Firstly, children who attend breakfast clubs are able to spend an extended amount of time with their peers in a supervised environment before the start of the school day. In the breakfast clubs investigated within the current study, children were offered the opportunity to spend between 30 and 85 minutes with their peers before school. This is a unique opportunity as schools generally have policies in place to prevent children from entering school premises, including the school yard, before a member of staff is present to supervise them thus limiting the time that children can spend with peers in school before the start of the formal school day. Additionally, breakfast clubs allowed children to spend time with peers that they might not otherwise be able to spend time with at other times throughout the school day. This is because as well as children being grouped in classes according to age, they are often separated at break times and lunch times according to key stages so the youngest children in school i.e. those in Key Stage 1 aged 5 - 7 years, do not spend time with the older children in school i.e. those in Key Stage 2 aged 8 - 11 years. The breakfast clubs discussed in the current

study welcomed children from all year groups across their schools and in one breakfast club children from two local schools attended and so children were provided with a unique experience to socialise with peers that they would be unlikely to encounter during a typical school day. Moreover, breakfast clubs were thought to promote the development of positive relationships between children and their peers and school staff and were recognised as a means of breaking down social barriers that impeded some children's ability to spend time with others.

The time that children spend with one another has important socio-developmental implications. Through play and shared activities, children learn an array of skills necessary for successful social interactions including cooperation, agreeableness, conflict resolution and communication (Fabes, Martin & Hanish, 2009). It is therefore plausible to suggest that it is essential to encourage children to spend time playing with peers in order to allow them to develop favorable social abilities. However, the number of play opportunities available to children in schools has decreased dramatically in recent years, particularly because break times have been markedly reduced in favour of a greater emphasis on academic activities (Ginsberg, 2007; Pellegrini & Blatchford, 2002). More recently, parental concerns over children's safety have also been highlighted as a factor responsible for the reduction in the number of play opportunities available to children. In a survey conducted by Play England (2012) 49% of 1000 parents surveyed said that their fear of "stranger danger" prevented them from allowing their children to play outside. Thirty-one percent of parents also feared that allowing their children to play outside could result in accident or injury. The

drastic reduction in play opportunities is concerning given that play is said to be an essential part of children's emotional wellbeing and development (Burdette & Whitaker, 2005).

Given that previous research has highlighted the importance of children being allowed to spend free time with peers and the current study suggests that breakfast clubs offer this opportunity, there is potential for breakfast club attendance to support the development of children's social abilities and their relationships with others. Furthermore, in support of the results of a study by Watson and Marr (2003), the findings of the current study suggest that the social environment of breakfast clubs may be particularly beneficial to children who find social situations challenging.

#### **2.2.2.1.3. Advantage Theme 2: Positive Start to the School Day**

Parents, school staff and children referred to a number of factors relating to breakfast clubs that combined to make the time before school and the start of the school day much calmer and more enjoyable for children. Additionally, school staff talked about how breakfast club staff gained a lot of enjoyment from their involvement in breakfast clubs.

##### ***Advantage Subtheme 2a: Enjoyable Time***

Parents were confident that their children enjoyed attending breakfast club and this view was supported by children's references to their enjoyment of breakfast club; no parents mentioned that their children did not like to attend. Moreover, it became apparent that children's enjoyment was a factor in the frequency of their attendance. While some parents had arranged for their children to attend breakfast club on particular days when they required child



care, some had yielded to their children's requests to attend breakfast club on additional days because their children enjoyed attending. Staff also recognised breakfast club as something that children and breakfast club staff enjoyed taking part in before the start of the formal school day.

### ***Advantage Subtheme 2b: Better than Alternative Options***

As well as believing that breakfast clubs were an enjoyable experience for children to engage in, parents, children and school staff suggested that breakfast club attendance was a better option than alternative options available to children before the start of the school day. Parents described how breakfast clubs often provided a more favourable environment for children to spend time in the morning than home did. When at home for the duration immediately before the formal school day, children were reported to be more likely to engage in conflict with siblings and less likely to be involved in positive social interactions with others during breakfast.

School staff also saw breakfast clubs as a haven for some children in the mornings as they are guaranteed the opportunity to eat breakfast and interact with others in a safe environment. These features, which were prominent in all breakfast club discussed, were thought to be lacking in some family homes in the morning.

Additionally, children believed that breakfast club was a better place to be than at home or on the yard before the start of school. One child also suggested that boredom ensues when children do not go to breakfast club and this can have a negative impact on their behaviour in the classroom.

### ***Advantage Subtheme 2c: Helps Attendance and Punctuality***

Reference was made by parents, school staff and children to the way in which breakfast clubs encourage children to attend school and arrive on time. In some cases, parents had found it challenging to get their children to school on time but described how their children's punctuality had improved as a result of attending breakfast club. Some parents felt that if breakfast club was to close their families would revert back to poor punctuality habits.

Similarly, school staff identified a notable association between children's breakfast club attendance and improvements in their attendance and punctuality; particularly at one school where breakfast club was being used successfully as an intervention to improve the punctuality of selected children. However, the cost of breakfast club attendance for the children in question was being covered by an external organisation. School staff therefore had some concerns that the children might revert back to being consistently late if the funding was withdrawn resulting in parents having to cover the cost.

Only one child mentioned that breakfast club helped them to get to school on time; though it was suggested that breakfast club was a crucial factor in ensuring he did not miss essential school work at the start of the school day.

### ***Advantage Subtheme 2d: Calmer Start***

Parents suggested that the time between getting up in the morning and arriving at school was less chaotic when children attended breakfast club. Parents described how there was less of a rush because their children did

not need to have breakfast before leaving the house and children were thought to be more co-operative with instructions to get ready for school when they knew they were attending breakfast club.

Staff suggested that once children are at school, breakfast clubs provide a calm environment for a short period of time before children enter the class, which results in them being more settled and ready to work at the start of the formal school day. Staff pointed out that children sometimes arrive at school unsettled after being rushed out of the house in a hurry to get to school when breakfast club is not part of their routine.

### ***Advantage Subtheme 2e: Prepares Children for the School Day***

Staff and children believed that breakfast club attendance led to children being happier and better able to focus on their school work at the start of the formal school day. Staff felt that children in their classes were more alert and able to concentrate in class after breakfast club. Children also associated improvements in their mood and alertness with attendance at breakfast club

#### ***2.2.2.1.4. Brief Discussion of Advantage Theme 2: Positive Start to the School Day***

Findings of the current study suggest that breakfast clubs lead children to experience a more positive start to the school day by influencing their school attendance, punctuality, behaviour, mood and ability to focus on their school work. First of all, it was apparent that children enjoyed attending breakfast clubs and the breakfast club environment was viewed as a favourable setting for children to spend time in before the start of the school day. Expectancy-

value theory suggests that a child's activity participation is determined predominantly by their level of enjoyment and interest in the activity as well as the child's expectations of success or failure in an activity and how important they perceive the activity to be (Mahoney et al., 2006). While it could be argued that children of primary school age are likely to have very little control over whether they attend a breakfast club as the decision probably rests with their parent, it was clear from discussions with parents in the current study that children's enjoyment of breakfast club in some cases determined the number of days their child attended; some parents had allowed their children to attend breakfast club on more days than necessary because they enjoyed attending. These findings emulate the results of an investigation by Fredricks, Hackett and Bregman (2010) who studied children's motives for attending an after school program and found that enjoyment of activities and preference for the club environment over home were the most commonly cited reasons for club attendance. Fredricks et al stressed the importance of considering the reasons for children's attendance at out of school clubs in order to find methods of encouraging them to attend and to reduce club attrition rates. Taken together, the results of the current study combined with the findings reported by Fredricks et al. suggest that children's enjoyment of an activity can potentially impact their level of attendance, which might consequently correlate with the benefits that children gain from attending.

School attendance, punctuality and behaviour were also thought to be positively influenced by school breakfast club attendance and it has been suggested that these factors are critical to children's achievement at school.

According to Epstein and Sheldon (2002) for children to achieve academic success they must be present in class to learn the material that is being delivered by the teacher. Moreover, when children are present in class it is important that they are able to focus on the work being taught therefore children's behaviour in class is of paramount importance. Poor behaviour not only impedes learning for a child who is causing disruption but it can also distract other children from learning and make it difficult for a teacher to teach (Ford, 2013). If it is the case that breakfast clubs encourage children to attend school on time and make children feel happier and better able to focus in class at the start of the school day as suggested in the current study then this has important implications for children, school staff and parents. As mentioned previously children need to be present in class and need to be able to attend to their work without disruption in order to learn. If breakfast clubs can support children in meeting these requirements then there is potential for schools to be able to use breakfast clubs as an intervention method to help children who struggle with attendance, punctuality or behaviour in school. However, before such a scheme could be implemented consideration would have to be given to the financial costs associated with encouraging children to attend breakfast clubs as a means of intervention. The issue of cost is discussed in more detail later in the current chapter.

Children's attendance, punctuality and behaviour in school also have wider implications for the external view of the school. In England schools are required to undergo formal inspections carried out by the Office for Standards in Education, Children's Services and Skills (OFSTED). OFSTED report directly to UK Parliament to provide an independent and impartial

rating of schools based on five main criteria: Overall Effectiveness; Achievement of Pupils at the School; Quality of Teaching in the School; Behaviour and Safety of Pupils at the School; and Quality of Leadership in, and Management of, the School. When considering the behaviour and safety of children at school, inspectors look at children's attendance and punctuality in addition to their behaviour and the level of disruption in classes and around school. As OFSTED ratings are used to formally monitor schools at a Government level and can lead to a school being closed down if they are found to be consistently poor, maintaining good standards of attendance, punctuality and behaviour is of paramount importance to schools.

Finally, breakfast clubs were thought to provide children with a calmer start to the school day, which began at home as children preparing to attend breakfast clubs were reported to be less likely to engage in conflicts with other family members and less likely to feel rushed in the time before school. This idea of breakfast club attendance prompting a calmer start to the day, particularly within the family home, supports previous findings of Shemilt et al (2003). Following interviews with parents Shemilt et al described children as "the main source of pressure within the family setting in the morning" (p. 106) and discussed how breakfast clubs acted as an incentive for children to get ready to leave the house in a more efficient manner and relieved pressure by removing the source of tension from the household earlier in the morning. Furthermore, in relation to the suggested association between breakfast club attendance and children's punctuality, it may be the case that improvements occur as a result of a less chaotic household in the morning i.e. if breakfast

clubs act as an incentive for children to get ready for school more efficiently, this might prevent them from being late for school.

The findings of the current study offer some insight into how breakfast clubs might provide children with a positive start to the school day and how this can have important consequences for children, their families and the wider school community.

#### **2.2.2.1.5. Advantage Theme 3: Breakfast Meal Provided**

The theme of Breakfast Meal Provided represented the views of parents, school staff and children who all recognised the provision of a breakfast meal as an advantage of breakfast clubs. It was suggested that the meal provided in breakfast clubs was enjoyable, supported positive eating habits and was particularly beneficial to those children who might otherwise skip breakfast if it was not available at school.

#### ***Advantage Subtheme 3a: Variety of Breakfast Foods Available***

Through focus groups with children it was evident that children liked having breakfast at breakfast club and they enjoyed the variety of foods available. Parents, school staff and children all suggested that the wide variety of foods available in breakfast club resulted in children being able to taste new foods that they had not had the chance to try at home. One parent also explained how her child had requested that she bought foods at home that he had tried for the first time in breakfast club.

### ***Advantage Subtheme 3b: Children More Willing to Eat Breakfast***

Parents had observed that their children are more willing than they are at home to eat breakfast and consume particular foods and drinks when they are served in breakfast clubs. School staff supported the views of parents as they also suggested that children were more willing to eat breakfast in breakfast club than at home; and this was cited as a motivation for some parents sending their children to breakfast club.

### ***Advantage Subtheme 3c: Healthy Options Available***

Some parents and staff pointed out that the breakfast consumed by children at breakfast club was nutritionally better and more substantial than the breakfast offered to some children at home. It was suggested that for some children the breakfast provided at home consisted of items such as cereal bars that were quick to serve and items of low nutritional value, such as crisps and fizzy drinks.

### ***Advantage Subtheme 3d: Breakfast Skipped at Home***

It became apparent that while some children were given unhealthy options for breakfast at home, some children skipped breakfast completely. School staff felt that there was a necessity for breakfast clubs as some children were not given breakfast at home before the start of the school day. One of the schools discussed in the current study welcomed families into their breakfast club so that parents could have breakfast with their children. One staff member suggested that this provision was often accessed by whole families as they were unable to afford breakfast at home. Moreover, some children



talked about how they did not always have breakfast at home. In some cases this was because breakfast was not available but for others breakfast skipping was a choice.

#### **2.2.2.1.6. Brief Discussion of Advantage Theme 3: Breakfast Meal Provided**

The provision of a school breakfast meal was recognised as a clear advantage of breakfast club attendance as it was thought to encourage children to eat a healthy variety of breakfast foods, some of which they might not have the opportunity to try at home. In discussing people's food preferences Conner and Armitage (2002) suggested that "people come to prefer what they are used to" (p. 14) indicating that exposure to foods is an important facet in the development of food preferences; a concept that has been supported within the research literature. For example, Wardle et al (2003) investigated children's liking for and consumption of red pepper following implementation of an 8-day intervention. Children aged 5 - 7 years, from 3 primary schools based in London, UK took part in the study. Children's liking and intake of red pepper were assessed on the day prior to the intervention phase and all children were randomly assigned to one of three experimental groups, in which they participated on eight school days: Exposure, Reward or Control. In the exposure group children were asked to taste some red pepper and to eat as much as they liked. In the reward group children were invited to taste some red pepper in return for a sticker. Children in the reward group were also told to eat as much as they liked but only had to eat one piece of pepper to receive their sticker. Finally in the control group, children were not seen by an experimenter during the eight

day intervention period; they completed pre- and post-intervention measures only, which measured their liking for and intake of red pepper on the day prior to and day after the intervention phase. For children in the exposure and reward groups, children's intake and liking of red pepper was measured pre- and post-intervention as well as on all eight intervention days. Results showed that liking and consumption of red pepper increased significantly more in the exposure group than the control group across the intervention period. The reward group showed an intermediate effect between the exposure and control groups but did not differ significantly from either group. The authors concluded that exposure to a particular food can increase children's preference for that food and while the offer of a reward was not detrimental, it might have inhibited the positive effects of exposure. In relation to the findings of the current study, it may be the case that repeated and consistent exposure to breakfast foods in breakfast clubs may increase children's liking for those foods. Additionally, the variety of foods available in breakfast club might allow for more taste exposures than children would encounter at home. For example, if a parent buys a particular product but the child initially rejects it, the parent might be reluctant to buy the product again whereas in breakfast clubs the same products are regularly available. Moreover, one parent mentioned that her child had requested that she buys fruit that had been served and enjoyed in breakfast club suggesting that there is potential for breakfast clubs to indirectly affect parents' food buying habits once children's liking for particular products has been established.

In order for repeated taste exposure to occur, children must be motivated to try foods that they might be unsure of (Wardle et al., 2003) suggesting that

exposure to foods in breakfast clubs is probably working alongside another mechanism to influence children's food preferences. School staff in the present study proposed that children are more willing to eat foods in the presence of peers that they might reject in other situations, which could imply that social facilitation plays a role in the foods that children consume in breakfast clubs. Social facilitation refers to the way in which the presence of another individual or group of individuals can influence a person's behaviour. For example, a person is likely to respond quicker to a given stimuli when others are present compared to when they respond to a stimuli alone (Hilgard et al., 1996). When applied to eating occasions, social facilitation results in people spending more time eating and consuming more food in the company of others than they do when eating alone and the effect is more pronounced when eating with family or friends than when eating with strangers (Clendenen, Herman & Polivy, 1994; DeCastro, 1995). Further to this, the matching norm proposes that people will model the behaviour of others present when eating by matching their intake (Roth et al., 2001). In a recent review of the literature, Houldcroft, Haycraft and Farrow (2013) summarised studies that have investigated the influence of friends and peers on children's eating habits. The authors' conclusions support the ideas behind social facilitation and matching norms to suggest that children model the eating behaviours of their friends and peers and this can subsequently affect their food consumption and preferences. In the context of the current study, it may be the case that children model the eating behaviours of their peers in breakfast clubs and by doing so they experience multiple taste exposures to foods that they are unwilling or unable to try at home,

consequently influencing their liking for particular foods and their willingness to eat them in breakfast club. Furthermore, these findings offer support to suggestions previously made by Shemilt et al (2003) who also found that breakfast clubs helped to alleviate some of the problems parents faced in trying to persuade children to eat breakfast.

Additionally, breakfast clubs discussed in the current study were thought to offer a more suitable alternative to home breakfast in some cases. To date no published studies have documented comparisons between breakfast consumed by children at school and at home (this is addressed in Chapter 5 (Study 4) of the current thesis). However, UK-based research has found that primary school children who attend breakfast clubs consume a higher proportion of healthy food items for breakfast than children who do not attend breakfast clubs (Murphy et al., 2010). Similarly, primary school breakfast club attendees have been found to eat more fruit for breakfast than non-attendees (Shemilt, 2004). The views expressed in the current study therefore support previous qualitative findings suggesting that breakfast clubs have the potential to help children to develop positive breakfast habits.

#### **2.2.2.1.7. Advantage Theme 4: Means of Support**

Under the theme of Means of Support it was discussed how breakfast clubs were a helpful resource for parents, children and the school as a whole. It was suggested that breakfast clubs offered reliable, flexible and affordable childcare, which was particularly beneficial to working parents. Breakfast clubs were also believed to offer a supportive environment where parents and children could approach breakfast club staff and be assured that important information would be passed onto relevant school staff.

#### ***Advantage Subtheme 4a: Supports Working Parents***

Breakfast clubs were thought to be particularly beneficial as a means of support for working parents. Parents indicated that breakfast clubs were invaluable in allowing them to get to work on time. Having the facilities available to be able to leave their children at school before the start of the formal school day meant that parents were far less restricted in the hours that they were able to work in the morning. Some parents expressed concerns that without breakfast clubs they would not be able to continue to work within their job roles.

Staff also acknowledged that breakfast clubs supported working parents by offering a reliable and affordable means of childcare. One staff member commented on how there is a necessity for before school child care as it is more difficult to ask members of extended family or friends to look after children at this time of the day. Children reiterated the views of parents and staff as they talked about how they were able to attend breakfast clubs when their parents went off to work.

#### ***Advantage Subtheme 4b: Offers Flexibility***

Parents believed that breakfast clubs offered them some flexibility on school mornings as it was not necessary for their children to have breakfast before they left the house for school. This was useful as it was suggested that children did not always want to eat first thing in the morning. Breakfast clubs also offered a source of child care that could be utilised at short notice and on an impromptu basis should the need arise. One parent mentioned that she had been able to sign her daughter up to breakfast club quickly and

easily for a temporary period when her usual means of child care had ceased without notice. This flexibility had allowed the parent in question to be able to continue to work without disruption to her normal shift pattern knowing that her child was taken care of. The flexible nature of breakfast clubs also meant that children did not have to arrive at a strict time like they do at school.

#### ***Advantage Subtheme 4c: Provides Peace of Mind***

Further to providing child care, breakfast clubs gave parents peace of mind that their children were being taken care of in a safe environment and would get to class on time at the start of the school day. Additionally, it was suggested that breakfast clubs gave class based staff peace of mind as they could be sure that certain children in their class had eaten breakfast before the start of the school day.

#### ***Advantage Subtheme 4d: Sense of Community***

The way that breakfast clubs brought children, school staff and families together was emphasised by school staff and children. For example, one school staff member talked about how their school allowed parents to work in breakfast club alongside staff and this helped them to feel involved in school. Furthermore, children talked about the family-like atmosphere that they felt part of in breakfast club.

#### ***Advantage Subtheme 4e: Communication Through Breakfast Clubs***

Staff emphasised the importance of the role of breakfast club staff in communicating key information from families into the school. Staff

suggested that some parents are unable to access the school office because they have to get to work before the office opens or they lack confidence in being able to approach office staff. Breakfast clubs therefore act as an intermediary point that some parents feel more able to approach to pass on information to school. Moreover, school staff believed that children viewed breakfast club staff as a point of contact in the morning. It was suggested that children could speak in confidence to breakfast club staff about any issues that they might be troubled with before the start of the school day. Having breakfast club staff available to support children in the morning was thought to be advantageous as it meant that issues could be dealt with before children were required to focus on their school work.

#### **2.2.2.1.7. Brief Discussion of Advantage Theme 4: Means of Support**

The finding that breakfast clubs were recognised as providing a means of support for parents and children compliments the findings of Shemilt et al (2003) who also described the ways in which breakfast clubs provide support to families. Shemilt et al reported that breakfast clubs were viewed by parents as a safe and secure means of reliable childcare that was particularly beneficial for parents who worked or engaged in further education, which was also evident in the current study. Taken together these findings suggest that breakfast clubs might have a role to play in increasing parents' ability and willingness to work. It has been suggested that for mothers, the availability of childcare is a critical factor in their decision to go out to work (Hinds and Park, 2000). This has been recognised in a recent policy set out by the UK Government who have taken steps towards reducing the cost of childcare in an effort to support working

parents and those in pursuit of employment. In the policy document 'More Affordable Childcare' (HM Government, 2013) the utilisation of school premises has been put forward as a means of increasing available childcare particularly outside of formal school hours. Consideration of the current findings in addition to those reported by Shemilt suggest that investment in breakfast clubs should be recognised as support for an intervention that helps families beyond the provision of a breakfast meal. It is evident that parents rely on breakfast clubs as a means of childcare and without such provision many parents would not be able to continue within their current job roles. Gray (2005) argued that with an increasing retirement age in the UK, parents of school-aged children are less able to rely on their extended family for help with childcare so accessible childcare provision needs to be in place to support families in pursuing and sustaining employment.

Additionally, it became apparent in the current study that breakfast clubs were working as a means of breaking down barriers between home and school. Many parents have negative perceptions of schools, which have often emerged from their own negative experiences as children at school. These negative perceptions make it difficult for some parents to trust school staff and they feel unable to communicate with school (Eccles & Harold, 1993). In an article by Cattermole and Robinson (1985) the importance of home-school relationships was emphasised. The authors explained that schools should work to build up positive relationships with parents and communities to ensure that the needs of children are met and that information about the school is freely available to allow people to make fully informed decisions on a school's performance and success. The findings of



the current study suggest that breakfast clubs help to support parents in successfully approaching and communicating with their children's schools.

Furthermore, it was reported by school staff in the current study that the availability of breakfast club staff before the start of the school day meant that children who attended breakfast clubs had someone they could depend on if they arrived at school needing help from a member of staff. This was thought to be particularly beneficial as it meant that issues can be dealt with before children enter the classroom thus minimising the disruption caused to their ability to focus on their work in the class. In discussing methods of reducing stress in children Jewett and Peterson (2002) suggested that children should be provided with time in a safe, supportive environment to allow them to disclose concerns. The findings of the current study suggest that breakfast clubs provide children with an environment that is conducive to dealing with stress prior to the start of the school day.

#### **2.2.2.1.8. Advantage Theme 5: Integral Part of School**

School staff described breakfast clubs as an essential element of schools. They were thought to contribute positively to the public image of the school, which was important for attracting prospective new families and for promoting the school to external organisations.

#### **2.2.2.1.9. Brief Discussion of Advantage Theme 5: Integral Part of School**

Staff in the current study recognised the importance of breakfast clubs in contributing to the overall profile of the school in terms of promoting a positive public image, which mirrors the findings of a recent survey

conducted by Lowndes and Dennison (2012). The survey aimed to investigate the provision of wraparound care, including breakfast and after school clubs provided outside of formal school hours in schools in Northern Ireland. Of the 342 schools that responded to the survey, 52% viewed the provision of wraparound care including breakfast and after school clubs as a 'good marketing tool for the school' (p. 49). In 2005, the Department for Education and Skills outlined plans to encourage all schools to offer an extended range of activities and support for families beyond the formal school day. Given that breakfast clubs are viewed as such an important aspect of the facilities that schools offer, it is surprising that there are currently no published research studies that have addressed the advantages and disadvantages of breakfast club provision according to those families and school staff that encounter them on a daily basis.

The implementation of breakfast clubs in schools as a means of improving children's nutritional outcomes has been proposed in the recent School Food Plan (Dimbleby & Vincent, 2013). The finding that schools with existing breakfast clubs perceive them as an important aspect of the school image could help to promote breakfast clubs to those schools who have yet to implement them under the School Food Plan. Furthermore, the importance of breakfast clubs in promoting a positive school image adds to the increasing evidence within the current study to suggest that breakfast clubs have significant implications for schools that extend beyond the provision of food and this is something that should be addressed in the planning and implementation of breakfast clubs, particularly under the School Food Plan.

#### **2.2.2.1.10 Advantage Theme 6: Variety of Activities**

All the breakfast clubs discussed in the current study offered children activities to do during the time they spent in breakfast club. Children suggested that they enjoyed having the opportunity to do activities and play with different toys and games before the start of the school day.

#### **2.2.2.1.11. Brief Discussion of Advantage Theme 6: Variety of Activities**

The finding that children talked favourably about the activities available to them in breakfast clubs suggests that these are a salient feature of breakfast clubs to children and something that should be carefully considered in the planning and development of breakfast club provision. Person-environment fit theory asserts that convergence between the characteristics of a person and their social environment can have a positive impact on their behaviour, motivation and psychological wellbeing (Eccles, Lord & Midgley, 1991). This theory is discussed in greater detail in Study 3 (Chapter 4) of the current thesis. It may be the case that the activities available in breakfast clubs ensure that the needs of children are met through their environment. This is because from a young age play is an essential facet of positive social, behavioural, cognitive and emotional development (Milteer, Ginsburg & Mulligan, 2012) and by offering a variety of activities it could be argued that breakfast clubs are meeting these needs for play opportunities.

#### **2.2.2.2. Disadvantages of Breakfast Clubs**

Although the views of parents, children and school staff were predominantly positive about breakfast clubs, some disadvantages of breakfast clubs were also identified.

#### **2.2.2.2.1. Disadvantage Theme 1: Food Issues**

While the provision of a breakfast meal was recognised as an advantage of breakfast clubs, it became clear that there were some issues with the lack of variety and poor nutritional standards of some of the foods served.

##### ***Disadvantage Subtheme 1a: Poor Nutritional Standards***

Although, at the time of the current research being conducted, school breakfast clubs were expected to adhere to food based standards for school food other than lunches as outlined by the Children's Food Trust (see Chapter 1 for a summary), these guidelines did not include any clear restrictions on sugar being added to cereals. However, two parents expressed some unease at the fact that children were able to request additional sugar to be put onto their cereals in breakfast clubs.

Staff and children also acknowledged that unhealthy breakfast options were made available to children in breakfast club. One member of school staff felt that a lack of awareness amongst the school's senior management team meant that the enforcement of change to the breakfast club menu would be difficult. However, a head teacher expressed the view that allowing a balance of foods considered to be healthy and unhealthy was a more practical solution as it allowed breakfast club staff to educate children about healthy eating and the importance of consuming certain items in moderation.

Children suggested that they did want unhealthy options to be available in breakfast clubs, though some children showed an awareness that particular foods could not be served within the breakfast club.

### ***Disadvantage Subtheme 1b: Lack of Variety***

Although children were complimentary about the range of breakfast foods available at breakfast clubs some parents felt that the selection of breakfast items available could be more varied.

#### **2.2.2.2.2. Brief Discussion of Disadvantage Theme 1: Food Issues**

As mentioned previously, exposure to certain foods can have an impact on children's liking and intake of those foods (Wardle et al., 2003). Additionally, dietary habits that develop in childhood can persist through to adulthood (Mikkila et al., 2005). With extended school services offering care to children before and after school it is possible for some children to consume three meals per day on school premises resulting in schools possessing a lot of responsibility for the foods that children are exposed to and potentially influencing their food preferences beyond their school years. Given that school food could play such a key role in the development of healthy dietary habits, the UK Government has previously worked with the Children's Food Trust to implement food-based standards that schools should have been adhering to at the time the current study was conducted (see Chapter 1 for a summary of the standards). However, the finding that unhealthy breakfast items such as chocolate spread are being served within breakfast clubs suggests that the food-based standards are not being followed. Moreover, it became apparent that some school senior management teams are not taking steps to ensure that their school breakfast clubs are meeting the requirements of the food based standards. One head teacher believed that serving a mixture of healthy and unhealthy items was necessary to be able to teach children about selecting the correct proportions of different foods to

ensure a balanced diet. These findings have significant implications for the new School Food Plan (Dimbleby & Vincent, 2013), which began to be implemented in schools from January 2014. In outlining the changes that need to be made to improve school food, Dimbleby and Vincent (2013) stated that “the only person with the power to orchestrate all this is the head teacher. They need support from their governors and leadership team, but if the head isn’t behind changing the food culture in a school, it won’t happen” (p. 8). This is evident from the present study as current school food standards were being breeched in schools where it was clear that head teachers were not committed to implementing the advised standards within their breakfast clubs. Plans are outlined within the School Food Plan to support head teachers and offer training to help them to improve the nutritional quality of the food served within their school while increasing uptake of school meals. However, in a survey of ‘more than 400 head teachers’ (p. 76) carried out as part of the work commissioned for the School Food Plan it was reported that while 20% of head teachers recognised the importance of promoting healthy school food they felt they did not have time to do anything about it. The findings from the current study support the idea that head teachers have a crucial role to play in the implementation of good school food standards but it is questionable whether training head teachers will emerge as a productive endeavour given their already busy schedules. Head teachers were not involved in the ordering or serving of food within any of the breakfast clubs discussed in the current study; the responsibility was placed on breakfast club and administrative staff. All the breakfast club staff interviewed in the current study were employed by their schools in other

capacities (e.g. teaching assistant) that did not require them to have any knowledge or experience of implementing nutritional or food based standards. Additionally, aside from obtaining a food hygiene certificate, breakfast club staff in the UK are currently not required to undertake any kind of training to ensure that they are confident in implementing the required food based standards. It may be the case that if such training was offered to breakfast club staff and supported by school head teachers then breakfast standards would be implemented more successfully. The benefits of training catering staff were evident in a study carried out by Nelson et al. (2006) who conducted surveys in 141 primary schools in England to investigate their lunchtime catering practices and adherence to nutrient based standards. Results showed that children made healthier lunch choices in schools where catering staff had received training in healthy eating and/or cooking though only 28% of the school catering staff involved in the study had received such training.

Sugar was mentioned as another area of concern in the current study as it was suggested that children are given the option to add sugar to their cereals within breakfast clubs, which has potential detrimental implications for their dental health. Worldwide figures reported by the World Health Organisation (2012) suggest that 60-90% of children suffer from dental cavities with the greatest prevalence of dental problems occurring in poorer and more disadvantaged communities. Current NHS (2009) guidelines recommend that teeth should be brushed twice per day to maintain a good standard of oral health. However, the guidelines also state that teeth should not be brushed for an hour after food consumption, particularly if fruit, fizzy drinks or

other sugary or acidic products have been consumed. When sugar is consumed it combines with proteins in the mouth to form glycoproteins, which stick to the teeth beginning plaque formation. Through a process of anaerobic respiration the bacteria in the mouth convert the fructose element of the ingested sugar into glycogen for energy. Lactic acid is then left behind in the mouth, which works to dissolve the calcium phosphate present in tooth enamel (Ophardt, 2003). Brushing teeth when the enamel is weakened after a meal can cause considerable damage (NHS, 2009) so it is not feasible for breakfast clubs to offer tooth brushing as an activity to promote good oral hygiene as they have a limited amount of time available. However, as sugar can have such detrimental effects on teeth and figures reported by the World Health Organisation suggest that dental cavities are already a highly prevalent issue amongst children, it could be argued that breakfast clubs should implement an alternative means of lessening the potential for tooth decay amongst children who attend. Anchan (2013) proposed that rinsing the mouth with water after a meal can help to neutralise acid and remove left over particles of food. As drinking water is freely available in schools, breakfast clubs could advise children to rinse their mouths after breakfast as a quick and effective method of lessening the effects of sugar on their teeth. If such a method was implemented, it would be useful to communicate this to parents so they are aware that even if sugar is added to cereal, steps are being taken to reduce the effects of sugar on children's oral health.

#### **2.2.2.2.3. Disadvantage Theme 2: Excluding Children**

Staff from two of the schools, where parents had to pay for their children to attend breakfast club, suggested that many children were failing to benefit



from the availability of the provision due to the existence of barriers to attendance. Interestingly, the issue of children being excluded from attending breakfast club was not raised by any staff in the school where breakfast club was provided free of charge to all children.

#### ***Disadvantage Subtheme 2a: Cost Barrier***

The cost of attending breakfast club was a concern for some staff as they believed it acted as a barrier to attendance, particularly for those children who would benefit most from the provision. For this reason, it was suggested by some staff that breakfast clubs should be provided for children at a subsidised rate or even free of charge.

#### ***Disadvantage Subtheme 2b: Teachers Give Ad Hoc Breakfast***

Evidence that some children are not benefiting from the provision of school breakfast clubs when a clear need exists was provided when some staff talked about how they had given breakfast to children who had arrived at school hungry having skipped breakfast at home.

#### ***Disadvantage Subtheme 2c: Additional Support Unavailable***

One member of school staff discussed how children who required one to one support for additional needs in school were not able to access breakfast club as relevant support within breakfast club was unavailable.

#### **2.2.2.2.4. Brief Discussion of Disadvantage Theme 2: Excluding Children**

The theme of Excluding Children strongly suggests that cost is a barrier to breakfast clubs for those children who would benefit greatly from attending.

The finding that exclusion was only evident in schools where breakfast club attendance incurred a charge supports the suggestion that cost is a major contributor to children being unable to access breakfast clubs. Breakfast clubs have been identified as a means of providing breakfast to children who would otherwise begin the school day having had nothing to eat or drink for breakfast at home (Donovan & Street, 1999). However, funding to support breakfast clubs is limited so many clubs have to charge a fee for attendance (Harrop & Palmer, 2002), which the findings of the current study suggest limits the availability of breakfast clubs to those children whose parents are able to afford to pay the required fees.

The finding that children in need of a school breakfast were not accessing breakfast clubs in schools where there was a cost associated with attendance was further supported in the current study by staff accounts of having to provide breakfast to children in the classroom at the start of the school day. The same suggestions were made by teachers in a recent survey carried out by the Association for Teachers and Lecturers (ATL, 2013). The survey included responses from 526 teachers and results showed that two thirds had given food or money to children who they knew had arrived at school hungry. Taken together the findings of the current study along with the results of the ATL survey suggest that more needs to be done to address the needs of children who are not provided with breakfast at home or given the means to obtain breakfast at school.

Furthermore, it became apparent in the current study that a lack of funding limited the support that could be provided within breakfast clubs. This meant that children requiring additional support for a special educational need

within mainstream schools were unlikely to be able to attend breakfast clubs as schools could not meet the costs of employing additional support staff to be present in breakfast clubs. This is unfortunate as research carried out by Watson and Marr (2003) found social benefits associated with breakfast club attendance for children diagnosed with Attention Deficit Hyperactivity Disorder suggesting that breakfast clubs have the potential to be used as an intervention to help children with special educational needs. However, before breakfast clubs could be used widely as an intervention, it is evident that financial costs must be addressed.

#### **2.2.2.2.5. Disadvantage Theme 3: Practical Concerns**

It became clear through interviews with school staff and focus groups with children that to develop breakfast clubs a number of practical improvements were needed such as improvements to facilities, resolution of staffing issues and inclusion of more children.

##### ***Disadvantage Subtheme 3a: Facilities Need Improvement***

While schools allocated space to accommodate their breakfast clubs, staff suggested that these spaces were not always ideally suited to children in terms of space and appeal. Furthermore, although children suggested that they were happy with the activities available in breakfast club, some of the toys and games were a little worn with broken or missing parts so if the opportunity arose to make improvements to breakfast clubs children would renew the available toys. Some children also mentioned that they would like the opportunity to play outside on occasion as breakfast clubs were generally held indoors.

### ***Disadvantage Subtheme 3b: More Staff and Children Wanted***

As noted previously, children enjoyed the social opportunities that were afforded to them through breakfast club but mentioned that they would like more children to be able to join breakfast club so that they would have more chances to make new friends. Some staff also suggested that more children would be able to attend breakfast club if the number of available breakfast club staff was increased. Furthermore, one staff member mentioned that their breakfast club was sometimes staffed by only one person, which was problematic when a large number of children arrived for breakfast, thus more breakfast club staff were needed.

### ***Disadvantage Subtheme 3c: Staff Missing Elsewhere***

In all participating schools the breakfast club staff had additional responsibilities in school, which were sometimes impacted by the breakfast club. For example, one member of school staff, who also worked in breakfast club, mentioned that she had arrived at school early in order to complete the tasks that she needed to do in the classroom in preparation for the school day before going on to conduct her duties within the breakfast club.

#### **2.2.2.2.6. Brief Discussion of Disadvantage Theme 3: Practical Concerns**

It was evident through discussions with children and school staff that the facilities made available for breakfast clubs in schools were not always optimal for purpose. In a review of the literature on UK breakfast clubs Defeyter et al (2010) pointed out that breakfast clubs are generally organised

in a way to suit the needs of the school and the facilities available. This was clear in the current study where breakfast clubs appeared to utilise the space and equipment made available to them. Only one of the breakfast clubs discussed in the current study had a room that was designated for the school's breakfast and after school clubs, though children in this school had to move elsewhere for breakfast as facilities were not available to serve breakfast within the designated breakfast and after school club room. The other three breakfast clubs discussed in the current study all utilised spaces within school that were used predominantly for other purposes i.e. one breakfast club took place in the main school hall, another used space that was allocated to the local church community and the final club took place in a classroom that had adjacent kitchen facilities. In addition to discontent about space, children expressed dismay that some of the toys provided at breakfast club were unsuitable as they were broken or had pieces missing. Furthermore, it became apparent that there were some minor issues with staffing of breakfast clubs that might be resolved through the employment of additional staff. More available breakfast club staff would mean that more children could attend and staff could work on a more flexible rota to fit with the demands of their additional roles within school.

As mentioned previously, Stage-Environment Fit Theory asserts that an environment must suit the needs of an individual if they are to benefit from it. Based on this theory it could be argued that more consideration needs to be given to the space that is used for the purpose of breakfast clubs and the supervision of children within breakfast clubs to ensure that the needs of the children who attend are being met. The advantages of breakfast clubs

outlined in the current study showed that children enjoy the activities available to them in breakfast clubs but the current theme implies that careful consideration needs to be given to the upkeep of equipment, the space that the activities take place in and the staffing of children within the clubs.

#### **2.2.2.2.7. Disadvantage Theme 4: Long Day**

Under the theme of Long Day staff expressed concerns that children attending breakfast club had to spend an extended amount of time in school. Children also talked about how they felt tired in the mornings before going to breakfast clubs.

##### ***Disadvantage Subtheme 4a: Extended School Day***

Some staff pointed out that breakfast club attendance resulted in some children spending a lot of time in school, especially if they attended an after school club in addition to a breakfast club. Staff were concerned that going to breakfast club meant that children were missing out on valuable time with their families. However, this was not a concern that was raised by any of the parents or children involved in the study.

##### ***Disadvantage Subtheme 4b: Tired Children***

Although all the children were very complimentary about their breakfast club and suggested that they enjoyed attending, some children mentioned that they felt tired in the mornings before going to breakfast club. However, it was not clear whether children felt tired because they had to get up earlier for breakfast club or whether they would have felt tired getting up for school regardless of attending breakfast club. Also, one child mentioned that

despite feeling tired before breakfast club, she felt fine once she was in breakfast club.

#### **2.2.2.2.8. Brief Discussion of Disadvantage Theme 4: Long Day**

Staff concerns about breakfast club attendees spending an extended amount of time on school premises reflect arguments put forward in favour of the over-scheduling hypothesis (for a review, see Mahoney, Harris & Eccles, 2006). The over-scheduling hypothesis postulates that children and adolescents acquiesce to external pressures to spend an excessive number of hours in out of school activities, which results in quality time with family being sacrificed thus leading to poor parent-child relationships and adjustment problems for children and adolescents. To date, very little support has been found in favour of the over-scheduling hypothesis (Mahoney et al., 2006) though recent research by Fredricks (2012) showed declines in educational outcomes for adolescents who participated in activities for more than 14 hours per week. At present, research into the over-scheduling hypothesis has predominantly focussed on out of school activity participation of children and adolescents in the USA (e.g. Luke et al., 2011; Mahoney & Vest, 2012) and no studies to date have looked specifically at the potential association between breakfast club attendance, children's wellbeing and their relationships with their parents. Given that breakfast clubs only last around 1 hour per day, it is questionable whether children attending breakfast clubs could be considered over-scheduled. However, investigation is warranted as children in the current study mentioned that they felt tired in the mornings before attending breakfast club; though it was not possible to determine whether children would feel tired at the start of the

school day having not attended breakfast club. It is important that the potential association between breakfast club attendance, children's relationships and wellbeing is considered given recent plans to extend breakfast club provision across the UK. Research of this nature would contribute to the scarcity of existing literature on the over-scheduling hypothesis and would set precedence for further UK-based research of this kind. The over-scheduling hypothesis in relation to breakfast club attendance is discussed in further detail in Study 3 (Chapter 4) of the current thesis.

### **2.2.3. Brief Discussion of Study 1a**

The current study set out to determine the advantages and disadvantages of school breakfast clubs according to parents, children and school staff in the North East of England. Findings showed that breakfast clubs have a number of positive factors relating to health, social, behavioural and educational outcomes for children. All breakfast clubs discussed within the current study offered children the opportunity to consume a breakfast meal. This was viewed favourably by parents, school staff and children because it meant that children who skipped breakfast at home had an additional opportunity to access a breakfast meal before the start of the school day. Also children enjoyed consuming breakfast at school; in some cases they were more likely to eat breakfast at school rather than at home and they had the opportunity to try new foods at breakfast club that were not available at home. As well as consuming breakfast in breakfast club, children were able to partake in a multitude of semi-structured play activities with peers and staff including building with construction materials, playing ball games and pretend play.



This social opportunity afforded to children through breakfast clubs was thought to be unique, particularly because it allowed them to spend time with peers that they might not otherwise have the opportunity to spend time with. Further advantages of breakfast clubs described in the current study pertained to broader factors such as the support that breakfast clubs offered to working parents and the calmer start to the day that breakfast clubs were thought to provide to children and their families. Additionally, breakfast clubs were viewed as an integral part of the school that played an influential role in the external presentation of the school in terms of wraparound care and children's behaviour, attendance and punctuality, all of which are crucial elements of OFSTED inspections.

However, a number of disadvantages of breakfast clubs also became apparent through discussions with parents, school staff and children. While the provision of breakfast was viewed positively, there were some concerns raised in the current study regarding the nutritional quality of some of the foods served. It became evident that in some schools current school food guidelines pertaining to breakfast clubs were not being completely adhered to, which has implications for the way that future school food interventions and guidelines are implemented. Further concerns about breakfast clubs surrounded practical issues such as problems with staff being taken from other school duties to run breakfast clubs and the potential for children to be excluded from attending breakfast club due to the necessary charges associated with breakfast club attendance in some schools. Additionally, there was some apprehension amongst school staff that children attending

breakfast clubs were allowed to spend an extended amount of time in school, which might contribute negatively to their family relationships.

Overall, the findings of the current study suggest that in low income areas of the North East of England breakfast clubs are well received by parents, school staff and children and possess a number of features that are believed to confer benefits for children, families and schools. However, the present findings also show that there are aspects of breakfast clubs that need to be addressed to ensure that breakfast clubs continue to meet the needs of the children who attend as well as their parents and school staff.

While the current findings provide a useful and unique insight into breakfast clubs from the perspective of parents, school staff and children, the ability to generalise these findings to other UK breakfast clubs is limited as the research was carried out in a small number of schools within low income areas of the North East of England. Also, all the breakfast clubs under investigation adopted the same breakfast club model where children were served breakfast before the start of the school day and allowed to participate in semi-structured play activities before going into class. In an effort to address these limitations a second study was conducted in the North West of England where a school breakfast scheme was set up by the Local Authority to provide a free breakfast meal to all primary school children in class or in the school hall at the start of the school day. Recruitment of breakfast clubs in the North West of England allowed consideration of whether there are key advantages and limitations associated with breakfast clubs regardless of regional location and model of operation. Following the same aims as Study 1a, Study 1b therefore aimed to determine the advantages and

disadvantages of breakfast clubs according to parents, school staff and children from a sample of schools running breakfast clubs in the North West of England.

## **2.3. Study 1b**

### **2.3.1. Method**

#### **2.3.1.1. Approach**

Following the same approach as Study 1a, parents and school staff took part in qualitative, semi-structured interviews. Study 1a showed that this is a useful method of collecting information about breakfast clubs from adults as all those who gave their consent to participate arrived at a pre-arranged time and took part with no issues emerging about the method of data collection used. All adults were happy with the questions asked and were all willing to have their interviews recorded. The same approach was therefore adopted for Study 1b.

For children, qualitative, semi-structured interviews were used instead of focus groups in this instance. The approach was altered for Study 1b as it became apparent in Study 1a that children were willing to disclose information about their home lives and there was some variation between children in aspects such as availability of breakfast. Although individual circumstances were not questioned further by other children within the focus group, it was not deemed appropriate to expect children to discuss this as part of a group. Moreover, there was a possibility that this issue might have been more prominent in the sample recruited for Study 1b as the breakfast

scheme under investigation had been set up with an aim of addressing a known problem of children arriving at school having had no breakfast. Finally, although the majority of children remained focussed on the discussion at hand, some children were very easily distracted by their peers and sometimes veered off topic. A semi-structured interview method was therefore used in an effort to counteract these issues.

#### **2.3.1.2. Participants**

Participants were recruited from five schools based in the North West of England. Four of the participating schools were primary schools that catered to children aged up to 11 years. The remaining school was an academy that included children from the age of 5 up to 16 years, however, only children from the primary section of the school (aged 5 - 11 years) were invited to participate in the study as the breakfast scheme was only available to children of primary school age. Similarly only parents of children participating in the breakfast scheme and school staff involved in the primary section of the school were invited to take part as it was important that participants were familiar with the scheme to be able to answer the questions asked in the interviews. The characteristics of the five participating schools are presented in Table 2.5. All schools were based in predominantly White British areas, which were populated by a higher proportion of White British citizens than the proportion of White British across the North West of England (87%) and the whole of England (79.8%). Three of the five school areas contained a higher proportion of working age benefit claimants than the proportion reported for the North West of England (19%) and the whole of England (15%). One school had a slightly higher proportion of benefits

claimants than the proportion for the whole of England. The remaining school had a low proportion of individuals claiming key benefits but a high percentage of children entitled to free school meals; however this school had a considerable number of children who travelled to school from other areas, which possibly explains the discrepancy between the high percentage of children entitled to free school meals and the low percentage of adults claiming key benefits in the area surrounding the school. The characteristics of each of the breakfast clubs discussed in Study 1b are presented in Table 2.6. The breakfast clubs were relatively new within each school having only been in operation for around 8 weeks when data were collected.

**Table 2.5:** Characteristics of participating schools and school areas in Study 1b.

School	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1b	467	Community	13.9%	4.5%	48.7%	55%	90%
2b	260	Voluntary Aided	7.3%	10.9%	25.5%	24%	95%
3b	205	Community	12.2%	0%	62.8%	42%	95%
4b	618	Community	4.9%	1.3%	8.4%	18%	98%
5b	736	Community	12.1%	4.0%	51.4%	13%	94%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

**Table 2.6:** Characteristics of breakfast clubs in Study 1b.

School	Cost	Activities	Breakfast	Led by	Availability	Duration
1b	Free	Breakfast only	Bread product, fruit juice and fresh or dried fruit	Class Teachers	Mon-Fri Term time only	8 weeks
2b	Free	Breakfast only	Bread product, fruit juice and fresh or dried fruit	Class Teachers	Mon-Fri Term time only	8 weeks
3b	Free	Breakfast only	Bread product, fruit juice and fresh or dried fruit	Class Teachers	Mon-Fri Term time only	8 weeks
4b	Free	Breakfast only	Bread product, fruit juice and fresh or dried fruit	Two teaching assistants and a parent volunteer	Mon-Fri Term time only	8 weeks
5b	Free	Breakfast only	Bread product, fruit juice and fresh or dried fruit	Class Teachers	Mon-Fri Term time only	8 weeks

Seventeen, White British parents (16 females and 1 male) from the five participating schools chose to take part in the current study. All participating parents were purposefully sampled as they had at least one child who had access to breakfast in their school throughout the school week. One of the parents who was interviewed served breakfast to children in the school where breakfast club ran in the school hall and no parents attended breakfast club with their child as this was not an option that was available in any of the schools. Table 2.7 presents the demographic information collected from parents.

**Table 2.7:** Summary of parent demographics from Study 1b (n=17).

Demographics	Response Options	Number of Parents
Age Range	26 - 35 years	5
	Above 35 years	12
Marital Status	Married	9
	Living with Partner	5
	Single	1
	Civil Partnership	1
	Divorced	1
Employment Status	Full time employment	3
	Part time employment	3
	Self employed	1
	Carer	3
	Unemployed	7
Number of Dependent Children	1 child	5
	2 children	4
	3 children	4
	4 children	2
	5 children	2



Two male and twelve female school staff from the five participating schools took part in the current study. All participating staff were White British and were purposefully sampled as they were all familiar with their school breakfast club and were able to give their views on it. One of the Teaching Assistants was in charge of the school breakfast stock, taking responsibility for organisation of the delivery of breakfasts to classrooms, disposal of food waste and packaging and stock rotation. The head teacher was in charge of how school breakfast was organised with the school and acted as liaison between the school and Local Authority. The remaining 12 staff members managed the serving of breakfast within their classes day to day. The demographic information collected from school staff is presented in Table 2.8.

Thirty-eight children (14 males and 24 females) were recruited from the five participating schools. Children were aged between 5 years 6 months and 11 years 4 months (mean age = 8 years 6 months) and all had attended their school breakfast club during the 8 weeks prior to the study taking place.

**Table 2.8:** Summary of school staff demographics from Study 1b (n=14).

Demographics	Response Options	Number of Staff
Sex	Male	2
	Female	12
Age Range*	26 - 35 years	6
	Above 35 years	7
Current Position in School	Head Teacher	1
	Class Teacher	7
	Assistant Head Teacher	1
	Teaching Assistants	2
	PE Co-ordinator	1
	Key Stage Leader	1
	Learning Mentor	1
Years Spent Working in Education*	Less than 5 years	3
	5 - 10 years	4
	11 - 15 years	3
	16 - 20 years	1
	21+ years	2

\*Head Teacher did not disclose age or years spent working in education

### **2.3.1.3. Materials**

As Study 1b shared the same aims as Study 1a the same demographic questionnaires, interview schedules and digital Dictaphones were used in Study 1b as were used in Study 1a. The same opt-in consent forms and debrief forms were also used but forms providing information about children's participation were altered so that they referred to children taking part in interviews rather than focus groups.

#### **2.3.1.4. Procedure**

##### **2.3.1.4.1. Adults**

The procedure adopted in Study 1a was also used in Study 1b. No adults who opted to take part in the study opted out at the interview stage.

##### **2.3.1.4.2. Children**

Individual interview times were organised with class teachers for all children who returned signed consent forms from their parent or carer allowing them to take part in the study. At the time the interviews were arranged, children met the researcher and were made aware that they would be invited to take part in an interview during the school day. Children were collected individually from their classrooms by the researcher at the designated time and were taken to a quiet area of their school to be interviewed. Following the same protocol as Study 1a, the nature of the study was described to the children and they were given the opportunity to opt to participate or withdraw from the study. No children opted out of the study at this stage. The questions that children were asked in Study 1a were also used for interviews with children in Study 1b as they were appropriately worded for use in focus groups or interviews. The interviews ended once children had exhausted all information they had to offer about breakfast clubs. Children were fully debriefed and escorted back to their class by the researcher.

All discussions with parents, children and school staff were recorded for subsequent transcription. An example transcript from each participant group is included in Appendix H.

#### **2.3.1.5. Coding and Analyses**

The method of coding and analysis used in Study 1a was found to be appropriate for the data collected and the topic under investigation. The same method of coding and analysis was therefore used in Study 1b.

#### **2.3.1.6. Reliability Analyses**

Following the same protocol as that adopted in Study 1a, 10% of the data collected for Study 1b were coded by a second coder. Initial coding showed that there was good agreement (Cohen's Kappa = .627;  $p < .001$ ) between the first and second coders' interpretations of the data. As in Study 1a, some quotes from Study 1b fitted well under two themes so clarification discussions were necessary before final codes were assigned to quotes. A summary of coder interpretations, coding discrepancies and coding resolutions are provided in Appendix J. Clarification discussions led to very good agreement between the first and second coders' interpretations of the data (Cohen's Kappa = .945;  $p < .001$ ).

### **2.3.2. Findings**

#### **2.3.2.1 Advantages of Breakfast Clubs**

##### **2.3.2.1.1. Advantage Theme 1: Breakfast Meal Provided**

The provision of breakfast emerged as a predominant theme throughout interviews with parents, school staff and children. It became apparent that there was a definite need for school breakfast for some children as they were not provided with breakfast at home. Children enjoyed having breakfast at school and the consumption of school breakfast was associated with positive dietary habits in children.

### ***Advantage Subtheme 1a: Variety of Breakfast Foods Available***

Food and drink was the main topic covered by children throughout their interviews. All of the children interviewed mentioned liking at least some of the breakfast items served at breakfast club. Children also liked the variety of foods and drinks made available to them and some suggested that breakfast club gave them the chance to try foods and drinks that were not available to them at home. In support of this, parents recognised breakfast club as a good way of introducing new foods to their children.

### ***Advantage Subtheme 1b: Breakfast Skipped at Home***

It was clear that providing their children with a nutritious breakfast was something that parents viewed as an essential part of their parental role with the majority of parents who were interviewed mentioning that they offered their children breakfast at home in the morning before they left for school. However, there was an appreciation amongst parents that for some children breakfast club was necessary as breakfast was not given at home. This necessity for school breakfast, particularly for children who do not have breakfast at home, was reiterated through staff accounts of providing breakfast to children on arrival at school before the breakfast scheme was implemented.

### ***Advantage Subtheme 1c: Children More Willing to Eat School Breakfast***

It became apparent that when children skipped breakfast it was not always because there was nothing available. Some parents pointed out that even when breakfast was provided to children at home they did not always want to

eat breakfast at the time it was offered but their children would happily eat breakfast at breakfast club. Parents also noted that children were more willing to consume items at breakfast club that they refused at home.

#### ***Advantage Subtheme 1d: Healthy Options Available***

It was suggested by parents that the breakfast served in breakfast club was more favourable than the breakfast offered to children at home in some cases. Parents talked about the way in which some children were allowed to consume quick and convenient foods, such as sweets, for breakfast on their way to school.

#### **2.3.2.1.2. Brief Discussion of Advantage Theme 1: Breakfast Meal Provided**

The views expressed by parents, school staff and children in Study 1b regarding the provision of breakfast are consistent with the themes that emerged surrounding breakfast in Study 1a. This suggests that breakfast clubs in the North East and North West of England are viewed as an enjoyable and necessary form of breakfast provision that is particularly beneficial for children who do not get breakfast at home or are given breakfast of poor nutritional quality. Moreover, in both areas there is a potential association between breakfast club attendance and positive dietary habits in children. As mentioned in Study 1a, the repeated exposure to a variety of nutritious breakfast foods in the presence of peers and school staff might support children in establishing a positive breakfast habit particularly because it is evident from the findings of the current study that children are

more likely to eat breakfast at breakfast club and try a wider variety of foods than they are at home.

The findings of Study 1b, showing a potential association between children's breakfast club attendance and positive breakfast habits, is advantageous to the promotion and development of school breakfast provision. The breakfast clubs discussed in Study 1b were set up with the intention of reducing health inequalities in an area of the UK beset with poor health outcomes including high rates of circulatory diseases and low life expectancy (NHS Blackpool, 2013). Further research is required to be able to quantify the differences between the breakfast habits of children who consume school breakfast and those who do not. A longitudinal element to such research would also be valuable so that any changes in children's nutritional profiles and health outcomes, for example body mass index and rates of illness, could be determined.

#### **2.3.2.1.3. Advantage Theme 2: Positive Start to the School Day**

Parents, school staff and children described numerous ways that breakfast clubs contributed to a positive start to the school day. The provision of breakfast was thought to be associated with favourable punctuality habits and children's ability to focus on their work in class. It was also suggested that breakfast clubs helped to reduce family stresses in the morning by extending the time available for children to have breakfast.

#### ***Advantage Subtheme 2a: Prepares Children for the School Day***

Parents believed that the consumption of breakfast in school led to children being better able to focus on their school work. One parent argued that the

alleviation of hunger and tiredness through school breakfast could be advantageous to whole classes of children.

Some staff supported the views of parents as they mentioned that they had noticed an improvement in children's ability to concentrate and pay attention in the class since the start of the breakfast scheme but this view was not shared by all school staff. One member of staff did point out that although she had noticed no difference to children in her class in terms of their ability to concentrate, she was aware that the impact of breakfast on children's attention can be dependent on a number of factors.

Children supported the views of parents and some school staff as they believed that having breakfast at school made them feel happier, more alert and energetic in the mornings.

#### ***Advantage Subtheme 2b: Calmer Start***

Parents felt that the availability of school breakfast alleviated some pressure within their households in the mornings as they saved time with not having to give their children breakfast before leaving the house. Similarly school staff believed that breakfast club gave some children more time in the morning because they could leave for school knowing that breakfast was going to be available when they arrived. In support of this, children discussed how they did not have to worry about having breakfast at home as they felt assured that breakfast would be available at school. This was particularly advantageous on days when families were running late for school.

#### ***Advantage Subtheme 2c: Helps Punctuality***



Although four of the five breakfast clubs discussed did not require children to arrive at school earlier than they would usually to begin the formal school day, some school staff had noticed an improvement in children's punctuality habits since school breakfast had become available. Yet it is important to note that some staff had noticed no improvement in punctuality and were keen to make this point. Though it seemed that staff gave priority to the provision of breakfast rather than children being on time, as some talked about how they saved breakfast for those children who arrived late, thus suggesting that breakfast did not provide an incentive for children to arrive at school on time.

#### **2.3.2.1.4. Brief Discussion of Advantage Theme 2: Positive Start to the School Day**

Some similarities emerged between the views expressed by parents, school staff and children in Study 1a and Study 1b in terms of the positive start to the school day that was afforded to children through breakfast club attendance. Firstly, parents, school staff and children in Study 1b discussed how breakfast club attendance prepared children for the school day by alleviating hunger, making them feel more alert and able to concentrate on their school work. These ideas imply that school breakfast provision has the potential to influence children's academic attainment and this was something that was specified by parents. Though, some school staff expressed conflicting views arguing that they had noticed no difference in children's ability to concentrate in class since school breakfast was implemented though one staff member recognised that the magnitude of the effect of an intervention such as breakfast provision can depend greatly on the

characteristics of the children involved in the intervention. The mixed views on the potential association between school breakfast and children's academic abilities expressed in Study 1b reflect the current state of the research literature in this area.

For example, in a review of the literature on school feeding and academic performance, Grantham-McGregor (2005) concluded that while there is evidence to suggest that "school feeding can help children's educational progress, particularly in undernourished children" (p. S156) other extraneous variables such as school organisation need to be considered as factors that could have an impact on the success of school feeding interventions thus showing that the link between school feeding and academic performance is not clear cut. The findings from Study 1b coupled with the existing research literature suggest that more research is required to be able to determine whether an association exists between school breakfast consumption and children's cognitive performance and academic attainment.

Some staff in Study 1b also reported that they had noticed an improvement in children's punctuality since the school breakfast scheme began. As discussed in Study 1a, children need to be present in class to be able to access the learning materials delivered by their teachers (Epstein and Sheldon, 2002) and punctuality is something considered within the OFSTED inspection criteria so has major implications for individual children and the school as a whole. However, it is important to note that not all school staff in Study 1b had noticed an improvement in children's punctuality as a result of the breakfast scheme being made available. Consideration of the way the scheme was implemented across schools might offer some explanation as to

why improved punctuality was not universally recognised as an advantage of the breakfast scheme. It became apparent through discussions with teachers that breakfast was provided for all children at some point during the school morning regardless of whether they arrived at school on time so the prospect of breakfast possibly only acted as an incentive to arrive on time for those children who felt that they needed breakfast before they started work in class. For children who looked forward to school breakfast but were content to wait until break time before eating, the breakfast clubs discussed in Study 1b would not act as incentive. It is possible that some lateness could be counteracted by only serving breakfast to children during a designated time slot at the start of the school day and not offering a second opportunity for breakfast after the allotted time but it could be deemed unethical to prevent late arriving children from consuming a breakfast provided as part of a universal scheme, which has been set up with the aim of reducing hunger in children. The conflicting views of different members of school staff regarding punctuality illustrates the complexities involved in setting up breakfast clubs and the importance of clearly defined aims because although, as the current study shows, breakfast clubs are associated with a multitude of benefits for children, families and schools, only a certain number of targets can be met within one scheme and the achievement of one goal might counteract the potential to achieve another.

Finally, although the majority of the breakfast clubs discussed in Study 1b did not require children to arrive at school earlier than they would usually to begin the normal school day, it was evident that the removal of breakfast from the routine in the family home alleviated pressure in the mornings. This

was particularly useful on days when families were running late as they could leave the house without breakfast confident in the knowledge that it would be served at school. This finding lends further support to the outcomes reported in Study 1a and previous results of a study conducted by Shemilt et al (2003) in which it was reported that breakfast clubs can help to alleviate stress within the family home in the morning before school.

#### **2.3.2.1.5. Advantage Theme 3: Time for Informal Interaction**

The main objective of the breakfast clubs discussed in Study 1b was to provide all primary school children with a nutritious breakfast at the start of the school day, so time was not set aside for children to partake in activities as they did in the breakfast clubs examined for Study 1a. Despite this, parents, children and staff interviewed in Study 1b still felt that the opportunity to have breakfast in school offered children valuable time to interact with their peers.

#### **2.3.2.1.6. Brief Discussion of Advantage Theme 3: Time for Informal Interaction**

Previous research has associated numerous benefits with eating a meal in the company of others including opportunities to support the development of positive social skills in children (Eisenberg et al, 2004) and to facilitate interactions while creating a sense of community and belonging within a group (Fulkerson et al, 2006; Cason, 2006). Despite the apparent benefits of shared eating practices, Jabs and Devine (2006) suggested that families have fewer opportunities to share meals together due to increased parental work pressures. It could be argued that by allowing children to spend time together eating in the morning, breakfast clubs have the potential to promote

some of the advantages that have been associated with family meal times such as improved social skills and basic table manners. Additionally, the incorporation of free time into a child's school routine has been found to be important as children become less attentive the longer they work without a break (Pellegrini & Blatchford, 2002) and the views expressed under the current theme suggest that breakfast clubs offer children this key opportunity for free time in school.

#### **2.3.2.1.7. Advantage Theme 4: Exceeding Expectations**

Through interviews with school staff it was evident that prior to implementation of the breakfast scheme school staff had been concerned that breakfast would be difficult to organise and would be more problematic than it turned out to be.

#### **2.3.2.1.8. Brief Discussion of Advantage Theme 4: Exceeding Expectations**

It was clear that for some staff the breakfast club was not as problematic as they had expected it to be. According to defensive pessimism theory (Norem & Cantor, 1986) when faced with a situation in which there is potential for failure, some people will set low expectations to help control their anxiety about the situation. Low expectations then lead individuals to prepare themselves for failure or to exert effort to reduce the likelihood that failure will occur. In the context of the current study, the school breakfast scheme was new and had been implemented with very little notice given to schools. It is therefore possible that the limited time available for school staff to prepare for the scheme led to feelings of anxiety that caused staff to engage in defensive pessimism. Given that defensive pessimism can act as a

motivational factor, it may be the case that when faced with the prospect of the breakfast club failing, staff made extra effort to ensure that this did not happen.

### **2.3.2.2. Disadvantages of Breakfast Clubs**

#### **2.3.2.2.1. Disadvantage Theme 1: Food Issues**

The most frequently occurring concern that was expressed through interviews with parents, school staff and children related to the types and amounts of foods served to children in breakfast clubs.

##### ***Disadvantage Subtheme 1a: Poor Nutritional Standards***

Parents expressed apprehension about the potentially high sugar content of some of the breakfast items that children were offered in breakfast clubs. Similar concerns were expressed by staff with some suggesting that many of the items served in breakfast club were high in fat and sugar.

##### ***Disadvantage Subtheme 1b: Too Much Food***

As school breakfast was offered to all children regardless of whether they had consumed breakfast at home, parents were worried that there was potential for children to consume a large amount of food during the school morning, which could cause them to gain unnecessary weight over time. As a result of their concerns, some parents had started to implement ways to try to counteract the possibility of their children gaining weight through the reduction of food provided at home. Staff expressed comparable unease about the large amount of food available to children in school during the school morning. All children, regardless of age, were provided with a three

item school breakfast each day. As a result, staff reported that they had observed some children being able to consume a considerably large amount of food across the school morning. However, staff also noted that not all the food items allocated to children were eaten everyday, so there was a lot of waste food left over at the end of the day. As a lot of the food delivered for children was individually packaged, some schools had found alternative ways of using up leftover breakfast items in an effort to reduce waste. For example, one school had an excess of milk left over at the end of term, which would have gone out of date during the holidays, so they offered this to families to take home.

#### ***Disadvantage Subtheme 1c: Food Improvement***

Although it was clear that children enjoyed having breakfast at school, children did not like all the items available at breakfast clubs. Amongst the items that children mentioned that they did not enjoy, pineapple juice was mentioned most frequently. Children, staff and parents believed that school breakfast would be improved if more traditional breakfast items, such as cereal, were made available.

#### **2.3.2.2.2. Brief Discussion of Disadvantage Theme 1: Food Issues**

The theme of 'Food Issues' that was identified in Study 1b raises similar concerns about the poor nutritional value of breakfast club food as those outlined in Study 1a. As the same issues were apparent in both the North East and North West of England it could be argued that the enforcement of current food standards for breakfast clubs in England is inadequate as prohibited breakfast foods such as cereal bars are being made readily

available to children within breakfast clubs. Moreover, in Study 1b it became clear that some children were able to access a large amount of food across the school day giving rise to apprehension about the potential for children to gain excessive weight. Within the current guidelines set out for breakfast in schools (for a summary, see Chapter 1 of the current thesis) there is no guidance on the amount of food that should be served to children in breakfast clubs. Under the scheme discussed in Study 1b all children from Reception (4 - 5 years old) to Year 6 (10 - 11 years old) were allocated a 3 item breakfast each day usually consisting of a juice drink, some fresh or dried fruit and a bread or cereal item such as malt loaf or cereal bar. Concerns of school staff and parents surrounding the issue of food quantities were justified given that previous research has shown that from around the age of 5 years, children become more susceptible to external food cues meaning that they rely on more than just appetite alone to decide when to stop eating. In an investigation by Rolls, Engell and Birch (2000) children aged 3 years and 5 years were offered a portion of macaroni and cheese on three separate lunch occasions across three weeks. Children were offered portions that were smaller than, larger than or equal to the recommended portion sizes outlined by the US Department of Agriculture. No significant differences were identified in the amount of food consumed by 3-year-olds between the three portion size conditions. However, children in the 5-year-old group ate significantly more macaroni and cheese when they were served the larger portion than when they had the smaller portion showing that by the age of 5 children's food intake is influenced by the quantity of food made available to them. This has implications for food served in school



as children might be prone to overeating if a substantial amount of food is offered to them.

In order to counteract the potential effects of their children consuming too much food for breakfast, parents in the current study described how they had tried to discourage their child from having breakfast at school; however such methods have the potential to be counterproductive. In a study by Fisher and Birch (1999) children aged 3 - 5 years were offered two types of crackers as snack foods that were similar in appearance and taste.

Children's access to the crackers was manipulated so that they had free access to both types of crackers in four unrestricted sessions. During four restricted sessions, children had free access to one type of cracker and restricted access to the second type of cracker so that they could only consume the restricted cracker at allotted time slots. During times of restriction, the restricted crackers were stored in sealed glass jars that were visible to children throughout the session. Fisher and Birch reported that children made more positive comments about the restricted cracker, made more requests for it and made more effort to obtain it than the unrestricted cracker. Children also commented on the unfairness that access to one type of cracker had been restricted. Furthermore, when comparisons were made between children's cracker choice and consumption in the restricted and unrestricted sessions, children selected and consumed more of the restricted crackers during the restricted sessions than they did during the unrestricted sessions. The authors concluded that when children's access to a palatable food is restricted while the food is still visible, their behaviour is directed towards that food. This has implications for universal breakfast schemes

such as the one discussed in the current study as it is possible that parental restrictions increase the salience of the food that is made available to children as part of school breakfast and potentially increases their desire for the food and consumption of it.

Given that food issues were present in breakfast clubs discussed in Study 1a and Study 1b, more work needs to be done between schools and policy makers to ensure that the correct information on the nutritional requirements for food served in schools are accessible and are being implemented sufficiently. Moreover, the findings from Study 1b suggest that where breakfast is going to be made available to children universally, more communication needs to take place between parents and schools so that all children are able to access a breakfast in a proportion that their parents deem to be suitable. This might mean that rather than restricting children's access to breakfast, schools and parents have to agree to compromise on what foods children will be allowed to consume at school if they have already had breakfast at home.

#### **2.3.2.2.3. Disadvantage Theme 2: Lack of Parental Input**

It is possible that parental concerns about the quality and quantity of the breakfast served in breakfast club occurred as a result of a lack of information being provided to them. Parents showed very little knowledge of exactly what was available to children in breakfast club. Additionally, some parents felt that they should be given more choice in what their children were allowed to have at breakfast club.

#### **2.3.2.2.4. Brief Discussion of Disadvantage Theme 2: Lack of Parental Input**

The findings under the theme of 'Lack of Parental Input' showed that some parents had very little understanding of the practicalities of the breakfast scheme i.e. what was being served for breakfast and when it was being served. They also expressed a lack of control over their children's participation in the school breakfast scheme as it was made available to all children and the choice of whether to consume breakfast or not at school was left to each child.

Although parents are not present in schools while their children are in attendance, parental input into school life is essential. Allowing parents to become involved in school decisions gives them a sense of empowerment and investment in school, which consequently makes them feel more engaged with their children's education (The New York State Parental Information and Resource Center, 2009). In the context of health promotion, school initiatives have been found to be more successful when parents are involved as this ensures that children are provided with clear and consistent messages at home as well as at school (Centers for Disease Control and Prevention, 2012). Further support for the importance of parental input was provided by Cho and Nadow (2004) who described parents as "critical in creating a healthy school environment" (p. 433) as they play a key role in encouraging their children to eat healthily.

Considering that previous evidence exists to promote the involvement of parents in school policies, particularly those on health-related issues, policy makers need to be aware of the importance of parental input into school

breakfast clubs. Communication could begin with making menus freely accessible to parents through school notice boards and websites and giving parents opportunities to be able to discuss any concerns they might have about the foods being served or the scheme in general to make sure that parents feel involved in matters that directly influence their children's health and wellbeing.

#### **2.3.2.2.5. Disadvantage Theme 3: Costly Scheme**

The financial costs of the breakfast scheme received a considerable amount of media attention around the time that the scheme began (January 2013) because the costs had been covered by the Local Authority at a time when many people within the Council had lost their jobs. Some parents therefore raised the cost of the scheme as an issue as they felt that the money could be better spent elsewhere. However, some parents recognised the value of the scheme and suggested that sponsorship would be a positive way of continuing the scheme while lowering the cost to the Council.

#### **2.3.2.2.6. Brief Discussion of Disadvantage Theme 3: Costly Scheme**

The cost of the breakfast scheme was a major concern for some parents, particularly because the local area where the scheme was set up was facing job losses and impending financial changes announced by the UK Government. Media reports suggested that the three-month pilot scheme would be fully funded by the Local Authority at a cost of approximately £700000 (Webb, 2013) and if the scheme was to continue, annual costs were estimated to be around £2.1 million (BBC, 2013a). Around the same time as the scheme was implemented in schools, many Local Authority employees learned that they would be made redundant (BBC, 2013b).

Additionally, the UK Government announced changes to the benefits system with the introduction of Universal Credit (Department for Work and Pensions, 2013a) and Bedroom Tax (Department for Work and Pensions, 2013b) meaning that many people claiming benefits would see a reduction in the amount of money made available to them. The substantial financial changes that both employed and unemployed people in the North West of England were faced with at time the breakfast scheme was set up might have led to the concerns about costs raised in the current study. It has been suggested that universal free breakfast schemes can save parents money by removing the need for them to provide breakfast for their children (Lewis & Cooper, 2013). Children's health can also be improved through positive changes in diet, which would consequently save Government money in health care. However, any changes in parental and Government spending are unlikely to be detectable in the short term so cost-benefit analyses of school food initiatives are rare (Lucas, 2003). Cost-benefit analysis carried out on school breakfast schemes implemented in the USA under the School Breakfast Program have shown that free breakfast schemes can be implemented and run successfully while making profit through careful financial planning and evaluation (Hillgren & Market, 2007).

The finding that cost was an important issue to some parents illustrates that cost-benefit analysis should be included as part of future school breakfast interventions in the UK. This would allow those directly affected by Local Authority and Government budget cuts to see the effects of investment in such schemes and to form a more informed opinion on any future investments. Moreover, some parents argued that sponsorship of the school

breakfast scheme would be a useful financial development as it would direct some of the costs away from the Local Authority. The suggested cost-benefit analysis might help Local Authorities to gain financial support for breakfast schemes from external organisations, which could in turn lead to further financial security for school breakfast schemes.

#### **2.3.2.2.7. Disadvantage Theme 4: Difficult to Target Support**

In addition to parental concerns about the cost of the breakfast scheme, it was clear from staff observations that breakfast clubs were not utilised by all children as a means of obtaining a single breakfast meal where breakfast was not available at home. This caused some staff to question whether a universal breakfast scheme was absolutely necessary or whether targeted support for particular families would be better. Nevertheless, some staff acknowledged that taking away the universal element of the breakfast scheme could raise considerable challenges that might result in children missing out on school breakfast when they would actually benefit from it.

The difficulty that schools would encounter in attempting to target particular children to attend breakfast clubs was confirmed through the views of some parents. Disadain was expressed towards other parents who relied on breakfast clubs to give their children breakfast in the mornings before school; one parent even argued that children not being given breakfast at home in the morning is a matter that should be addressed by Social Services.

#### **2.3.2.2.8. Brief Discussion of Disadvantage Theme 4: Difficult to Target Support**

It was evident within the current study that targeting school breakfast provision to particular children would be extremely difficult and would result in some children missing out on school breakfast despite needing it. As mentioned in the Introduction to the current study, Brown, Beardslee and Prothrow-Stith (2008) suggested that the allocation of free breakfast on a means-tested basis that is dependent on family income results in many children choosing not to have breakfast at school due to the stigma associated with accessing it for free. Furthermore, the Food Research and Action Center (2009) reported that offering universal free breakfast removes the stigma associated with targeted free provision and results in a substantial increase in the number of children accessing breakfast.

Findings of the current study showed that even when breakfast was offered free to all children, there was still some stigma associated with families who chose to make use of the provision. As the scheme was in the pilot phase when the interviews took place, further research is needed to determine whether stigma continues to surround free breakfast access longer term and whether this has any influence on children's attitudes towards school breakfast and those who access it. Previous research has established that parents' attitudes and behaviours can influence their children's attitudes and behaviours (Trost et al, 2003; Brown & Ogden, 2004; Poutanen et al, 2006). It is therefore important that parents' views towards school food schemes are determined and that the influence this has on children's participation and

attitudes towards others who participate can be investigated so efforts can be made to reduce stigma surrounding school food if necessary.

#### **2.3.2.2.9. Disadvantage Theme 5: Temporary Scheme**

At the time the interviews took place, the breakfast scheme was in a pilot phase and it was unknown whether the scheme was going to be implemented on a more permanent basis in the future. Staff were concerned that if the scheme ended parents would have to take responsibility for providing their children with breakfast and this would result in some children skipping breakfast.

#### **2.3.2.2.10. Brief Discussion of Disadvantage Theme 5: Temporary Scheme**

Staff in the current study had concerns that the withdrawal of the breakfast scheme would be detrimental as some children would return to skipping breakfast before the start of the school day. As discussed in Chapter 1 of the current thesis, skipping breakfast extends the overnight fast that occurs during sleep and can result in hunger, metabolic stress and a decline in cognitive performance, which has the potential to hinder children's educational attainment if breakfast skipping is repeated over a prolonged period of time (Pollit, 1995; Mathews, 1996; Wyon, 1997).

Research has demonstrated how children and families become dependent on school food schemes and the detriment that occurs when the scheme is unavailable. Gill and Sharma (2004) interviewed parents who were reliant on benefits and had children who were entitled to free school lunches. Parents reported that they had noticeably less money during school holidays than



they had during term time. This decline was attributed to having to provide food to their children in the place of the free meals that they would usually have at school. Additionally, in response to having to buy more food during the school holidays parents felt that they were forced to buy items that were of poor nutritional quality because these were more affordable than healthier options. Gill and Sharma argued that the intake of poor quality food can contribute to illness and obesity in children.

From the findings of the current study and the results presented by Gill and Sharma (2004) it is evident that parents become reliant on school food schemes and a sudden withdrawal of school food provision could be detrimental to children's diets, which potentially has longer term health implications. It could therefore be argued that when implementing school food schemes, policy makers need to be aware of the long term consequences of providing food to children and the implications of removing the provision. Moreover, consideration needs to be given to what happens to children's diets during school holidays when school food is unavailable.

#### **2.3.2.2.11. Disadvantage Theme 6: Facilities Need Improvement**

Finally with regards to the disadvantages of breakfast clubs, some staff suggested that the space used for breakfast clubs could be improved. Although some staff felt that the breakfast scheme was running better than they expected it to run within their school, other staff suggested that serving breakfast to children in class had been problematic as it had hindered work time and caused a mess in some cases. Therefore, moving breakfast to another space in the school would be a more favourable option for some.

#### **2.3.2.2.12. Brief Discussion of Disadvantage Theme 6: Facilities Need Improvement**

As in Study 1a, staff in Study 1b had some issues with the space that was being utilised for school breakfast. Some staff in Study 1b believed that breakfast should not be served in the classroom, particularly because it hindered learning time. These findings lend support to the results of an investigation carried out by Bernstein et al. (2004) who reported on cases of school breakfast being moved from classrooms to school cafeterias due to problems with excess mess being made in the classroom during breakfast. Similarly, Lent and Emerson (2007) found that while the majority of staff involved in a Milwaukee Public School breakfast program were satisfied with the way breakfast was served in their school, more than 20% of staff were unsatisfied or very unsatisfied with breakfast being served in the classroom one month after program implementation. Some of the staff had issues with the additional work load that was put upon them as a result of the scheme including the requirement to distribute breakfast, children requiring additional support such as opening wrappers and the need to tidy away after breakfast. However, Lent and Emerson (2007) also emphasised the positive outcomes associated with serving breakfast to children in the classroom. They reported that breakfast served in the classroom was more accessible to children than breakfast served elsewhere and they noted a 240% increase in the number of children accessing breakfast when a breakfast in the classroom model was adopted.

The findings of the current study combined with the results of prior investigations suggest that while breakfast in the classroom can be a

successful initiative for supporting children in accessing breakfast, this model might not be suitable in all cases. It is clear that what works well in one school might not be convenient to another so close liaison with school staff during the planning and early implementation phases of breakfast clubs is essential.

### **2.3.3. Brief Discussion of Study 1b**

The aim of Study 1b was to investigate the advantages and disadvantages of a newly implemented school breakfast scheme in the North West of England. The views of parents, children and school staff showed that the breakfast scheme had a number of key advantages similar to those identified in Study 1a. Firstly, the provision of a breakfast meal consisting of a variety of healthy breakfast choices was thought to be advantageous as it ensured that children who skipped breakfast at home had the opportunity to consume something at the start of the school day. Also, children were more willing to eat breakfast and try new foods at school breakfast than they were at home. This suggests, like the findings showed in Study 1a, that school breakfast provision could be associated positively with children's dietary preferences and habits.

A further advantage that emerged in Study 1b that was also evident in Study 1a was the finding that breakfast clubs offered children a more positive start to the school day by making the time before school less chaotic, encouraging children to arrive on time and making children feel happier and more alert. However, it should be noted that some school staff believed that breakfast club attendance made no difference to children's punctuality and preparedness for work and they made it clear during discussions that they

had not noticed a difference within their classes. So, although breakfast club attendance might provide some children with a positive start to the school day, such a difference is not universally recognisable across all classes suggesting that further investigation is required to be able to determine the difference that breakfast clubs make to children at the start of the school day and what factors influence the magnitude of any existing differences. It also became clear in Study 1b that the social elements of breakfast clubs are a salient feature that children find enjoyable and parents and staff see as beneficial. Mirroring the findings of Study 1a, it was evident that the free time offered to children to chat to peers while having breakfast is a positive feature of breakfast clubs. Finally, unique to Study 1b, the theme of Exceeding Expectations indicated that despite the reservations of some staff prior to implementation of the breakfast scheme, the scheme was running better than expected.

In terms of disadvantages of the breakfast scheme discussed in Study 1b, the nutritional quality and quantity of the food served in breakfast club was a major issue particularly for parents and school staff. There were also some concerns that the space utilised for the daily serving of breakfast was not suitable in some schools. These findings reiterate some of the concerns that were raised in Study 1a thus suggesting that food and space might not be given enough consideration in the planning, implementation and development of breakfast clubs. Cost was also raised as a concern amongst parents and staff as well as the difficulties that could arise if breakfast provision was targeted towards certain families. Again, these arguments bring to light similar issues to those put forward in Study 1a; however, while

cost was a problem in Study 1a as it excluded some children from attending breakfast clubs, the high cost of offering a universal free breakfast scheme so all children were included led to criticism from some parents and school staff in Study 1b. Finally, the temporary nature of the breakfast scheme and the lack of parental input into the scheme were disadvantages that emerged as unique to Study 1b.

Overall, Study 1b showed that a breakfast scheme set up in the North West of England possessed similar advantages and disadvantages to breakfast clubs set up in the North East of England. This implies that there are salient features of breakfast clubs that warrant further investigation given that they are shared amongst clubs in different areas of the UK and not unique to one particular place. Furthermore, the findings of Study 1b support the idea put forward in Study 1a that school breakfast provision has the potential to influence children, families and schools in ways that extend beyond the dietary and nutritional implications of providing food to children.

## **2.4. Conclusions**

The current study aimed to present the views of children, parents and school staff on school breakfast clubs by addressing the research question: What are the advantages and disadvantages of school breakfast clubs according to parents, school staff and children? Furthermore, the study was split into two parts to investigate whether similarities existed between the advantages and disadvantages of two different models of breakfast clubs set up in different areas of the UK. The breakfast club models adopted in both areas set out to provide breakfast to children at the start of the school day but the

models differed in a number of ways. Firstly, breakfast provided in the North West was universally free of charge to all primary school children as it was funded by the Local Authority while breakfast clubs in the North East ran independently of the Local Authority and the cost of children's breakfast club attendance, which ranged from free of charge to £2.50 per child per day, was generally covered by their parents. Secondly, most of the breakfast clubs in the North West provided breakfast to children in the classroom at the start of the school day while breakfast clubs in the North East took place in designated spaces within the school before the start of the school day, beginning as early as 7:30am. Finally, the breakfast clubs in the North West set out to provide breakfast only while breakfast clubs in the North East all included an array of activities for children to participate in before the start of the school day. Findings of the current investigation revealed a number of advantages and disadvantages of breakfast clubs and, despite the practical differences between the two breakfast club models, there was a high proportion of similarity between the themes that emerged across the two parts of the study. A summary of the themes that were evident across Study 1a and Study 1b is provided in Appendix K.

Unsurprisingly, given that one of the main objectives of breakfast clubs is to provide a breakfast meal to children, food emerged as a key topic of conversation featuring in the advantages and disadvantages of breakfast clubs in both the North East and North West of England. The breakfast meal provided in breakfast club was thought to be beneficial to children for a number of reasons. First of all it was thought to offer food provision to children who would otherwise skip breakfast at home thus supporting

previous arguments put forward by policymakers (e.g. London Assembly Health & Environment Committee, 2013) and charities (Magic Breakfast, 2013) that breakfast clubs have the potential to play a prominent role in reducing child hunger and poverty by ensuring that children are provided with a breakfast meal prior to the start of the formal school day. Furthermore, even when breakfast was available to children at home, some preferred to eat it at breakfast club and were reported to be more willing to try new foods in breakfast club than they would be at home. Hence as well as breakfast clubs having the potential to counteract hunger and poverty, they may also influence children's breakfast habits and food preferences. It is therefore essential that close consideration is given to the foods served in breakfast clubs particularly because, as mentioned previously, childhood dietary habits can track into adulthood (Mikkila et al, 2005). However, the findings of the current study also showed that despite schools having access to guidance on foods that should be served in breakfast clubs, food based standards are not being fully implemented within breakfast clubs meaning that children are able to consume items such as chocolate spread for breakfast at school. As discussed previously, this has implications for future operation and development of breakfast clubs as it implies that more work needs to be done to ensure that good standards of nutrition are implemented and maintained within breakfast clubs.

In addition to the importance of the foods served in breakfast clubs, it was apparent through discussions with parents, children and school staff that breakfast clubs have wider reaching benefits for families and the school community. Breakfast club attendance was thought to provide a more

positive start to the school day for children; it encourages them to cooperate with household morning routines, promotes school attendance and punctuality and prepares children for the working day by making them feel happier and more alert going into class. These factors were thought to contribute to a less stressful family home in the morning and a more enjoyable time for children. Additionally, a number of parents viewed breakfast clubs as a safe and reliable means of childcare that allowed them more flexibility in the hours that they could work and peace of mind that their children were safe in school for the rest of the day. These wider reaching aspects of breakfast clubs are areas that should be promoted to policymakers, schools and parents as they show that breakfast clubs have the potential to support working parents and might have a role to play in encouraging unemployed parents to return to work. Furthermore, as discussed previously, these wider reaching aspects could influence the way in which a school is viewed externally by school inspectors, which has considerable implications for the success of a school.

Another key theme that was apparent across Study 1a and Study 1b was the importance of breakfast clubs in providing an informal social outlet for children before the start of the formal school day. Even when activities were not provided to allow children time for free play with peers, the social opportunities afforded to children around the breakfast table were recognised suggesting that the social environment should be a major consideration in the planning and implementation of breakfast clubs to ensure that this valuable opportunity to encourage social interaction between peers is utilised.



Finally, the current study showed that while breakfast clubs provide a number of benefits for children, families and schools there are some practical issues that emerged in Study 1a and Study 1b that warrant acknowledgement. Cost was thought to be a particular hindrance to the ability of some schools to successfully target support to children who would benefit most from attending breakfast clubs. However, when breakfast was offered universally free of charge to all children at a cost to the Local Authority, the source of financial support was criticised as it was felt that the scheme was not needed by all children and therefore was much more expensive than it needed to be. There was also some expression of stigma towards those parents who openly relied on the scheme as a means of providing breakfast to their children in the mornings. These findings show that cost has major implications for the way in which breakfast clubs can be used. It appears that when there is a charge for attendance, breakfast clubs exclude children who might benefit from attendance but whose parents are unwilling or unable to pay. Though when breakfast clubs are provided free of charge to all children there is some stigma associated with attendance and the clubs are utilised by children who might not need to rely on them as a source of breakfast food in the mornings. Some concerns were also expressed regarding the temporary nature of school breakfast when it is funded at a Local Authority level and the lack of communication between parents and schools that results in parents being unaware of the key aspects of breakfast clubs, such as what children are consuming for breakfast and when it is served. These issues present essential considerations for policymakers and schools wishing to invest in breakfast clubs as they have

implications for the extent of support that can be offered through breakfast clubs i.e. if breakfast club attendance incurs a charge it is unlikely to be useful in targeting 'hard to reach' families unless the costs of attendance are covered by the school or an external agency. Furthermore, if parents are not kept informed about the details of breakfast clubs, they might be more reluctant to encourage their child to participate than they would be if they were aware of the foods and facilities available.

Overall, the current findings offer a useful and original insight into primary school breakfast clubs in the UK. However, the study has some limitations. Firstly, all parents who opted to be interviewed were mothers; no fathers chose to independently take part in the study. One father attended an interview with his partner but he did not make an independent contribution to the interview. This may be because, as suggested by Riley and Shalala (2000), mothers tend to have more involvement in their children's education and school life than fathers do and therefore it might be the case that mothers felt that they had more to contribute to the study than fathers did. While this created consistency across the sample of parents interviewed, it would be interesting to find out fathers' views on breakfast clubs to determine whether they share the same views as mothers on what the advantages and disadvantages of breakfast clubs are and whether they perceive breakfast clubs to have the same impact on their work schedules and morning routines as mothers do. Moreover, the study only included children who attended school breakfast clubs and their parents so while the reasons for breakfast club attendance are clear from this study, reasons for non-attendance are not detailed. However, investigation of reasons for non-attendance went

beyond the scope of the current study which aimed to determine the views of individuals who were associated with their school breakfast clubs with the intention of establishing outcomes relating to breakfast club attendance for further investigation. Secondly, interviews were conducted in low income areas of the North East and North West of England so it is not possible to generalise the findings to all UK breakfast clubs as the current study does not present data from a sample that is representative of the UK population. However, it should be noted that the current findings have particular relevance to the breakfast clubs that will be set up under the School Food Plan as these will be targeted towards schools in low income areas of the UK. The current findings therefore offer a useful point of reference for those involved in the design and implementation of these breakfast clubs, particularly with regards to aspects that might cause issues if not considered carefully, for example types and amounts of foods served. Finally, in an effort to maintain consistency across interviews, only breakfast clubs based in schools were considered but many UK breakfast clubs take place within community buildings such as children's centres and church halls. Given that a number of advantages and disadvantages identified within the current study linked to various aspects of school life, it would be interesting to consider the advantages and disadvantages of breakfast clubs that take place in community buildings to see what the differences are between school and community breakfast clubs and to find out whether one type of club emerges as more advantageous with fewer drawbacks than another.

Despite the limitations outlined, the current study revealed a number of factors associated with breakfast club attendance that have not been

explored within the UK research literature and therefore offer some possible areas for future study. Food was discussed under advantages and disadvantages of breakfast clubs in both parts of the current study implying that while it is advantageous for breakfast to be served to children at school, there are some issues with the quantity and nutritional quality of the foods made available. Breakfast clubs will be promoted under the new School Food Plan but if they fall short of nutritional guidelines in a similar way to the clubs discussed in the current study then this goes against the aims of serving breakfast to children as a means of potentially improving dietary and health outcomes. Further research is therefore needed to investigate children's breakfast habits and to determine whether food served at breakfast club makes a positive contribution to children's breakfast food intake. Additionally the social element of breakfast clubs was emphasised by parents, children and school staff across Study 1a and Study 1b and although previous studies have acknowledged that breakfast clubs offer children opportunities for informal interaction in the morning before school (Welsh Assembly Government, 2004), no published studies have considered the potential association between breakfast club attendance and children's social relationships. Such a study is warranted because children's social relationships play a crucial role in their development (Hartup & Rubin, 2013) so if it is the case that breakfast clubs are associated with the development and maintenance of children's relationships then there is potential for breakfast clubs to be used as an intervention to support children who might face difficulty in social situations. Moreover, there were concerns expressed amongst school staff members that by attending breakfast clubs children

might be missing out on valuable time at home with their parents. Given that many parents rely on breakfast clubs as a necessary form of childcare, further investigation is needed to determine whether children's relationships with their parents might be adversely affected by breakfast club attendance so that efforts can be made to rectify this. Finally, breakfast clubs were thought to provide children with a settled start to the school day by ensuring that they were in school on time, giving them the opportunity to spend free time with peers in a relaxed and enjoyable environment before that start of the school day. These findings are contradictory to anecdotal evidence presented in a large scale investigation conducted by Shemilt et al (2004). They found that children's behaviour can be boisterous and unsettled as a result of attending breakfast clubs and this was attributed to the boisterous activities that were permitted in some breakfast clubs. However, no published studies to date have presented observational data to show what behaviours children engage in within the breakfast club setting and whether this behaviour carries on into the classroom environment at the start of the school day. An observational study of this nature would advance the literature surrounding breakfast clubs and behaviour as it would offer the first observational evidence to show whether children's behaviour is more positive or negative within breakfast clubs and how children behave in the class following breakfast club attendance.

In conclusion, the findings of the current study show consistent advantages and disadvantages of school breakfast club attendance relating to social, nutritional, behavioural and academic outcomes for primary school children in low income areas of the North East and North West of England. The

findings offer a unique contribution to the existing research literature on breakfast clubs in the UK by presenting the views of parents, school staff and children within a single study. The findings also offer a useful starting point for further investigation into school breakfast clubs and present evidence that would be of use to policymakers involved in key decisions surrounding the implementation and development of breakfast clubs within the UK, particularly in relation to proposals set out in the School Food Plan.

## **CHAPTER 3: Breakfast club attendance and children's relationships with peers and teachers in school**

### **3.1 Introduction**

In Study 1 (Chapter 2) of the current thesis children, parents and school staff discussed the ways in which breakfast club attendance offered children unique opportunities for social interactions that they would be unlikely to encounter at other times throughout the school day. Prior research has highlighted that similar opportunities are also made available to children through organised activity attendance after school. For example, Durlak and Weissberg (2007) proposed that after school clubs 'offer opportunities for positive interactions with adults and peers' (p. 5). Moreover, investigations into these after school experiences have shown that the organised activity environment is conducive to the development and maintenance of relationships and that these relationships might be a key contributor to children's academic success and psychological wellbeing (Vandell & Shumow, 1999; Mahoney, Larson, Eccles & Lord, 2005).

Social Capital Theory (Putman, 2000) highlights the importance of social interactions. According to Putman (2000) 'social capital refers to connections among individuals- social networks and the norms of reciprocity and trustworthiness that arise from them' (p. 19). Putman believed that through interactions people can build a sense of belonging, commitment, trust and tolerance that can confer numerous benefits particularly for health and wellbeing (Smith, 2012). Using data collected as part of the second and third phases of NELS:88, which is a US Department of Education sponsored

study, Broh (2002) investigated social capital in relation to the extracurricular activity participation of 12578 adolescents when they were in 10<sup>th</sup> grade (aged 15 - 16 years) and 12<sup>th</sup> grade (aged 17 - 18 years). As an indicator of social capital adolescents reported the frequency of interactions they encountered with teachers outside of class and the frequency of school-related discussions they had with their parents. Additionally, parents reported on the frequency that they initiated contact with school regarding volunteering opportunities or their child's studies or future career options and the frequency with which they interacted with their child's friends' parents to discuss their child's career aspirations and school related matters. Results indicated that adolescent extracurricular activity participation was linked to increases in school-related talks with parents, interactions with teachers outside of class, parental contact with school and discussions between parents thus demonstrating a positive association between extracurricular activity participation and social capital. Broh argued that social capital is important within the academic context as it can encourage the sharing of information and resources amongst adolescents, parents and school staff as well as helping to maintain a level of social control, which promotes compliance with school rules and values. Additionally, it was suggested that structure, adult supervision and parental involvement are key components that support the development of social capital.

According to Shaefer et al (2011) school-based extracurricular activity settings have three key factors that encourage friendships. Firstly, extracurricular activities provide opportunities for regular, peer contact while focussed on a shared activity and it is under such circumstances that new



friendships are likely to develop. Secondly, extracurricular activity involvement presents participants with opportunities to develop skills such as team building and emotion regulation that in turn support the development and maintenance of friendships. Finally, those who participate in extracurricular activities are likely to share similar interests increasing the likelihood that friendships will occur.

Shaefer et al (2011) investigated friendships in relation to extracurricular activity participation using data collected as part of the National Longitudinal Study of Adolescent Health. Cross sectional data were obtained from 67124 adolescents (mean age = 14.90 years) from 108 middle and high schools in America. Follow up friendship data were also collected from 2550 adolescents from 2 schools 8 months after the first measures were taken. At the first time point adolescents completed a questionnaire at school that asked them to provide demographic and behavioural information and details of their friendships and activity participation. Demographic details were collected on gender, race, school grade and socioeconomic status (SES); SES was determined by parental education. The average of adolescents' English, Maths, Science and Social Studies grades was used to indicate Grade Point Average. A problem behaviour score was also computed from the average of seven items that asked adolescents to rate how often they had engaged in problem behaviours such as smoking and skipping school during the previous 12-months. Finally, for behavioural information the average of five items focussing on emotions was used to calculate a depression score. The demographic and behavioural information was used to determine homophily, which is the extent to which adolescents are similar

to one another. For friendship, adolescents were asked to list their five closest female and five closest male friends from their school. Only reciprocal friendship nominations (i.e. adolescents selected each other as friends) were included for analysis. Adolescents were also provided with a list of 30 extracurricular activities, which were subsequently grouped into three types: sports (e.g. football, swimming), arts (e.g. drama, orchestra) and academics (e.g. student council, computer club). Adolescents were asked to highlight which activities they participated in or were planning to join during the school year and from this information activity co-participation (i.e. whether two adolescents participated in an activity together) was determined.

Analysis of data collected on homophily and friendships showed that adolescents who were similar on demographic and behavioural characteristics were more likely to be friends. The strongest relationship emerged between school grade and friendship with adolescents in the same grade being 8.8 times more likely to be friends than adolescents in different grades. Consideration of friendship networks showed that adolescents were more likely to be friends if they shared mutual friends. Also adolescents who participated in the same activities were more likely to be friends than adolescents who did not share activities and this result was more likely to occur in high schools than middle schools. When activity types were considered in relation to friendships, adolescents who co-participated in arts were significantly more likely to be friends than adolescents who co-participated in sports. The likelihood of friendships amongst academic activity co-participants fell between sports and arts co-participation but did not differ significantly from either activity.

Analysis of the longitudinal friendship data collected from a subsample of adolescents showed that activity co-participation at Time 1 resulted in a greater likelihood that adolescents would become friends at Time 2 compared to adolescents who did not co-participate. When friendship persistence (i.e. the likelihood that friends would remain friends) and activity co-participation were considered within each school, results from School A showed that Time 1 activity co-participation between friends did not make any difference to whether adolescents remained friends. For School B, friends who co-participated in an activity at Time 1 were more likely to remain friends than adolescents who did not participate in an activity together. However, activity co-participation had a greater effect on friendship formation than on friendship persistence. The authors concluded that extracurricular activity settings are “uniquely poised to promote friendships” (p. 14) and provide an environment that might be useful in supporting adolescents with few or poor quality friendships.

As well as out of school activities supporting the development of friendships, it has also been suggested that they might possess elements that help to protect children from or elevate their exposure to peer victimisation. In line with Routine Activity Theory, Peguero et al (2013) suggested that “It is through an individual’s routines and activities that influence his or her risk of being victimized” (p. 2). Peguero et al explained that victimisation within out of school activities is dependent upon the presence of a suitable target and perpetrator and the level of supervision within the activity. They further argued that while out of school clubs should offer some protection from victimisation, there is potential for such activities to bring together bullies and

victims whilst under less adult supervision than they would be during the normal school day.

Peguero (2013) investigated the impact of extracurricular activities on adolescent experiences of bullying victimisation and reported mixed results. Utilising data collected from 7990 White, Black and Latino students as part of the Education Longitudinal Study of 2002, Peguero measured students' experiences of bullying victimisation and established which school clubs, if any, students were involved in. To measure bullying victimisation, students were asked to indicate whether or not they had been subjected to: 1) threats of being hurt at school; 2) being hit by someone; 3) had items or money taken forcefully; 4) been bullied or picked on; 5) had something stolen at school; 6) had belongings purposely damaged or destroyed by another person. Students were asked about their experiences during the first term of a new school year. For activity participation, students were asked to indicate their involvement in: 1) Classroom-related activities such as band, choir and school newspaper; 2) School Club, which involved elements of peer support within the context of a shared interest, for example service and vocational activities; 3) intramural sports including baseball and cheerleading; 4) interscholastic sports such as football and soccer. Students were also asked to indicate whether or not they had misbehaved in school by getting into trouble for not following school rules and/or skipping classes. Additional demographic data were collected on students' socioeconomic status (SES), gender, academic achievement and race/ethnicity.

Results showed that as SES increased, students' likelihood of being bullied also increased. Conversely, as student standardised test scores increased

their likelihood of being bullied decreased. Males were more likely to be bullied in school than females and White students were more likely to be bullied in school than Black and Latino students. When students' experiences of bullying were considered in relation to their extracurricular activity participation results revealed that adolescents who were involved in three or more classroom-related activities and those participating in between one and three intramural sports were more likely to experience bullying than adolescents who did not participate in these activities. Students who took part in inter-scholastic sports were less likely to be bullied than students who were not involved in inter-scholastic sports. Peguero concluded that students who participated in inter-scholastic sports may be more protected from victimisation than students involved in intramural sports and classroom-related activities because of differences in social status and guardianship (i.e. level of adult supervision). Peguero suggested that students who take part in interscholastic sports are held in high regard amongst peers and school staff and are perceived to be physically strong whereas those students who participate in classroom-based activities or intramural sports are possibly viewed as weaker and therefore become more susceptible to bullying. Additionally, interscholastic sports attract a higher level of adult supervision than other school based activities thus reducing the likelihood that interscholastic sports participants will be victimised.

Collectively, the findings from prior investigations show that participation in out of school clubs can have a substantial impact on children's relationships. However, research in this area is scarce (Poulin & Denault, 2013) and the few studies that have considered social relationships in the out of school club

context are limited as they have focussed mainly on adolescent populations in American middle and high school settings (Fredricks & Simpkins, 2013). Moreover, after school clubs have been the predominant focus of numerous investigations while no studies to date have measured specific aspects of children's social relationships to determine whether breakfast club attendance makes a difference to children's relationships. This is surprising given that breakfast clubs share some of the features of after school clubs mentioned previously that are thought to contribute to children's relationships. For example, Shaefer et al (2011) suggested that after school clubs offer opportunities for regular engagement in activities with peers, which encourages friendships to develop. Similarly, breakfast clubs provide children with opportunities to meet regularly with peers while engaging in shared activities (Defeyter et al., 2010) so there is potential for the breakfast club environment to support friendships. Furthermore, Peguero (2013) suggested that adult supervision might be one element of out of school clubs that influences the level of victimisation that takes place within a club. In the context of breakfast clubs, Shemilt et al. (2004) reported anecdotal evidence to suggest that some breakfast clubs might lack adequate adult supervision thus there is potential for children to encounter peer victimisation within breakfast clubs. In addition, Broh (2002) reported that participation in some out of school clubs can lead to improvements in social capital including increased interactions with teachers outside of class time. In a similar way to after school clubs, breakfast clubs offer children opportunities to spend extra time on the school premises, which might consequently present more chances for children to interact with teachers, but to date no research has

looked at whether out of school club participation leads to improvements in children's relationships with their teachers.

Given the findings and limitations of previous research into social relationships and out of school clubs in addition to the arguments put forward in Study 1 of the current thesis, the present study aims to investigate whether an association exists between breakfast club attendance and children's social relationships across time. Specifically, comparisons will be made between children who attend school breakfast clubs, children who attend after school clubs, children who attend both breakfast *and* after school clubs and children who attend no clubs on measures of friendship quality, peer victimisation and pupil-teacher relationship quality. Comparisons between the specified groups are necessary to allow consideration of whether time spent in any activities on the school site before or after the formal school day may be associated with changes in children's social relationships or whether any differences between groups can be related to participation in a certain type of activity i.e. before or after school. A measure of friendship quality will be included as Hartup and Stevens (1997) argued that when investigating friendship it is not enough to look at the existence of friendships alone but the quality of friendships is also important. Furthermore, Poulin and Denault (2013) suggested that there is a lack of research investigating whether out of school club participation has an impact on the quality of children's friendships. In light of the findings of research by Peguero (2013) described previously, a measure of peer victimisation is warranted given that research also suggests that breakfast clubs might lack adequate supervision (Shemilt et al, 2004), which could in turn have an impact on the level of victimisation

present within the club. Further to this, the peer victimisation items will be adapted to look at children's treatment of others to determine whether children who attend different out of school clubs report more frequent victimisation of others given that previous research has implied that some clubs might offer more opportunities for victimisation to occur (Peguero et al., 2013). Finally, items from the friendship quality measure will be adapted to determine the quality of children's relationships with their class teacher as research shows that out of school club attendance might allow children more opportunities for interaction with teachers (Broh, 2002). Measures will be taken longitudinally because as discussed in Chapter 1 of the current thesis there have been calls within the research literature for more investigations in out of school club settings to measure changes in variables across time (Poulin & Denault, 2013).

The current study will offer an original contribution to the research literature by investigating whether there is an association between children's breakfast club attendance and their social relationships across time. This is unique as no published studies to date have measured children's social relationships relative to school breakfast club participation. Additionally, the majority of studies on out of school club participation have focussed on adolescents from middle and high schools in the USA whereas the current study will sample children from primary schools within the UK.



## **3.2. Method**

### **3.2.1. Participants**

One-hundred-and-seven children were recruited from four primary schools based in the North-East of England. Demographic information on the participating schools and the areas the schools resided in is provided in Table 3.1. All schools had a breakfast club and numerous after school clubs running on the school site for the duration of the study. Details of the participating breakfast clubs are provided in Table 3.2.

**Table 3.1:** Characteristics of Study 2 participating schools and school surrounding areas.

School	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1	243	Community	10.7%	12.3%	43%	17%	81.9%
2	262	Voluntary Aided	4.2%	7.4%	21%	22%	97.9%
3	187	Community	7.5%	0%	39.9%	25%	97.9%
4	274	Community	11%	0%	48%	25%	86.1%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

**Table 3.2:** Characteristics of breakfast clubs participating in Study 2.

School	Breakfast Clubs					
	Cost	Activities	Breakfast	Led by	Availability	Duration
1	20p	Computers, outdoor play	Cereal, toast, beans, yogurt, fruit, juice	Teaching Assistants	Monday-Friday 8:00am-8:50am	4 years
2	£2.00	Ball games, skipping, toys, drawing	Cereal, toast, pancakes, juice, fruit	Teaching Assistant and Lunchtime Supervisor	Term time only Monday-Friday 8:00am-8:50am	4 years
3	£2.00	Table top activities, pretend play, construction	Cereal, toast, beans, eggs, fruit, yogurt, juice	Teaching Assistants	Term time only Monday-Friday 8:00am-8:50am	7 years
4	Free	Table top activities, outdoor play	Toast, cereal, fruit, juice	Teaching Assistants	Term time only Monday-Friday 8:00am-8:50am	3 years
					Term time only	

Ethical approval was sought and gained from the Faculty of Health and Life Sciences at Northumbria University. Informed consent was obtained from head teachers and parents and pupils provided verbal assent prior to commencement of data collection at each study point. At time 1, School 1 and School 2 adopted an opt-in method of parental consent as this is the favoured method of consent adopted by the British Psychological Society and the Northumbria University Ethics Board. However, School 3 and School 4 requested permission to use an opt-out method of consent, which required Head Teachers to provide consent for all children in their school to participate in the research unless they were opted out by their parent or carer. The change in consent was requested to reduce administrative burdens on school staff. Use of this consent method has been justified in the research literature when the method of data collection does not require children to take part in tasks that differ greatly from activities they would carry out within their usual classrooms (Rose & Asher, 1999); the methods used in the current study were thought to fulfil this criterion. Finally, due to the nature of the topic under investigation, any children who were identified by their school as having a special educational need were excluded from participation.

Children were divided into four groups based on their out of school club participation: the breakfast club attendee group (BC) consisted of children who reported attending breakfast club only; the after school club attendee group (ASC) was made up of children who attended at least one after school club only; the both clubs group (Both) consisted of children who attended breakfast club and at least one after school club; and the no clubs group

(None) was made up of children who did not attend breakfast club or any after school clubs. It was initially envisaged that it would be possible to consider children's relationships in relation to their out of school club attendance across a 12-month period by taking measures at three time points separated by six months. However, 66 children switched study groups by altering their out of school club participation between Time 1 and Time 2 or between Time 2 and Time 3 so it was not possible to conduct analysis as originally planned. Inspection of the data across the 12-month study period showed that 88 children reported being in the same study group at two consecutive time points separated by six-months; these children were therefore included in the final study sample for purposes of analysis. Sixteen children were withdrawn from the study as they reported switching their club attendance at each of the three time points. The final study sample consisted of 43 females and 45 males aged between 5 and 11 years (mean age = 8 years 11 months).

Fifteen children reported attending their school breakfast club at two consecutive data collection points. These children attended a breakfast club on their school site prior to the start of the school day and did not attend any after school clubs. When asked how many days they attended breakfast club each week at the first time point, four children reported occasional attendance i.e. they did not attend breakfast club consistently every week, one child reported attending one day per week, two children reported attending three days per week and eight children reported attending five days per week. At the second time point, three children reported attending their school breakfast club occasionally, one child reported attending one day

per week, two children reported attending two days per week, two children reported attending three days per week, one child reported attending four days per week and six children reported attending five days per week.

Twenty-two children reported attending at least one after school club at two consecutive data collection points. After school clubs were defined as any clubs that took place on the school site after the school day had ended.

Children included in this group did not attend their school breakfast club. At the first time point, 18 children reported attending one after school club per week, three children reported attending two after school clubs per week and one child reported attending four after school clubs per week. Children reported attendance at 10 different after school clubs: five were sports clubs, three were arts clubs, one was an academic club and one was an after school care club. At the second time point, 20 children reported attending one after school club per week, one child reported attending two clubs per week and one child reported attending three clubs per week. Of the seven clubs children reported attending at the second time point, four were sports clubs, two were arts clubs and one was an after school care club.

Eleven children reported attending their school breakfast club and at least one after school club per week at two consecutive data collection points.

When asked at the first time point how often they attended their school breakfast club, three children reported attending one day per week, two children reported attending two days per week, one child reported attending three days per week and five children reported attending five days per week. In terms of their after school club attendance, seven children reported attending one after school club per week, three children reported attending

two after school clubs per week and one child reported attending three after school clubs per week. Of the seven after school clubs children reported at the first time point, two were sports clubs, one was an after school care club, one was an academic club, two were arts clubs and one was a gardening club. At the second time point, one child reported attending their school breakfast club on one day per week, three children reported attending two days per week, two children reported attending three days per week and five children reported attending five days per week. In terms of their after school club attendance, 20 children reported attending one after school club per week, one child reported attending two after school clubs per week and one child reported attending three after school clubs per week. Of the seven clubs reported by children, four were sports clubs, two were arts clubs and one was an after school care club.

The fourth study group consisted of 40 children who did not attend a breakfast club or any after school clubs on their school site before or after the formal school day at two consecutive time points.

All children's club attendance was self-reported. Further details about the school clubs and children's attendance at these clubs was requested from school staff but this information was not disclosed.

### **3.2.2. Materials**

#### **3.2.2.1. Number of Friends**

Before the quality of children's friendships could be measured it was important to identify whether each child could nominate a best friend.

Children were therefore asked to list all the friends they had in school,

starting with their best friend at the top of the list. On completion of their friend list children were asked to specify how much free time they spent with their best friend using a three-point scale. If children only saw their best friend in class this was given a score of zero. If children spent time with their best friend outside of class such as break times and lunch times or outside of school only this was given a score of one. Finally, if children spent time with their best friend in school and outside of school time including in out of school clubs, this was given a score of two.

#### **3.2.2.2. Friendship Qualities Scale (Bukowski, Hoza & Boivin, 1994)**

The Friendship Qualities Scale is a 23 item questionnaire, which aims to measure the quality of a child's friendship with their best friend. The scale presents children with a series of simple sentences such as “My friend helps me when I'm having trouble with something”. Each item belongs to one of five subscales, which represent five key dimensions of friendship: companionship, help, security, closeness and conflict (see Appendix Li).

Four items measure companionship, which considers the amount of free time a child voluntarily spends with their best friend. Help is measured by five items, which look at how much mutual help and protection from victimisation a child receives from their best friend. The item *“If I forgot my lunch or needed a little money my friend would loan it to me,”* which was included in the help subscale of the original Friendship Qualities Scale was adapted to read *“If my friend had something that I needed to borrow he/she would loan it to me”* for the purpose of the current study. This change was made as many children in UK primary schools have a lunch provided by school and have no reason to carry money around school, particularly those in the lower school



years. However, this change was potentially detrimental to the psychometric properties of the scale as reliability was found to fall short of an acceptable level for the majority of the subscales (Cronbach's Alpha Range = .526 - .810; see Appendix M).

Five items measure security, which reflects a child's belief that their best friend can be relied upon in times of need and their friendship can overcome difficulties. Closeness is represented by five items that measure a child's feelings about their best friend and their perception of their best friend's feelings about them. Finally, conflict, which is the only negative dimension of friendship measured by the Friendship Qualities Scale, consists of four items focussing on a child's experiences of fights, arguments and disagreements with their best friend. Children respond to each item by deciding how true they perceive each sentence to be about their relationship with their best friend. Children provide their answers using a five point Likert scale ranging from 1 ("Not True") to 5 ("Really True").

Sub scales consisting of five items have a minimum score of five and a maximum score of 25. Sub scales consisting of four items have a minimum score of four and a maximum of twenty. The scale has previously been administered for self-completion by children as young as 6 years old (Defeyter, 2008) through to adolescents aged 16 years (Woods, Done & Kalsi, 2009).

#### **3.2.2.3. Quality of Relationship with Class Teacher**

The quality of the relationship between a child and their class teacher was measured using an adapted version of the Friendship Qualities Scale. The items from the Friendship Qualities Scale were altered to refer to the teacher

instead of the friend, for example, the original item “My *friend* helps me when I’m having trouble with something” became “My *teacher* helps me when I’m having trouble with something” (see Appendix Lii).

The adapted scale consisted of 23 sentences, which measured the same dimensions as the Friendship Qualities Scale: companionship, help, security, closeness and conflict. Children rated how true they perceived each sentence to be about their relationship with their class teacher using a five point Likert scale, ranging from 1 (“Not True”) to 5 (“Really True”).

Unfortunately, the the majority of the subscales fell short of an acceptable level of reliability (Cronbach’s Alpha Range = .545 - .767; see Appendix M).

#### **3.2.2.4. Multidimensional Peer Victimisation Scale (Mynard & Joseph, 2000)**

The Multi-dimensional Peer Victimisation Scale is a 16 item questionnaire, which measures children's experiences of victimisation across a specific time period. For the purpose of the current study, children were asked to think about their experiences during the last two weeks (see Appendix Liii).

The scale presents children with a series of simple sentences, for example, “During the last couple of weeks another pupil has kicked me”. Each sentence belongs to one of four sub scales: Physical Victimisation, Social Manipulation, Verbal Victimisation and Attacks on Physical Property. The physical victimisation sub scale focuses on children's experiences of physical harm, such as being punched or kicked by another pupil. The physical victimisation subscale item “*Hurt me physically in some way*” was adapted to read “*Pushed me over to try and hurt me*” in order to simplify the wording

used for the age group under investigation. The social manipulation subscale pertains to negative social experiences such as turning peers against each other. The item *"Tried to make my friends turn against me"* from the social manipulation subscale was altered to read *"Made other pupils not talk to me"* in an effort to simplify it for the age group under investigation. The verbal victimisation scale concerns verbal behaviours used to hurt another such as name calling. Again, to simplify the language used, the item *"Made fun of me because of my appearance"* was changed to *"Made fun of me because of the way I look"*. Finally, the attacks on physical property scale measures the frequency of children's experiences of having possessions damaged or stolen. The item *"Deliberately damaged some property of mine"* was simplified to read *"Damaged something of mine on purpose"* and the item *"Took something of mine without permission"* was altered to *"Took something of mine without asking"*. Children are asked to rate how often they have experienced each of the behaviours described by choosing from "Not at all," "Once" or "More than once" for each sentence. Each subscale yields a minimum score of zero and a maximum score of eight. A higher score suggests that a child has experienced more incidents of victimisation. The scale's internal consistency (range = 0.73 - 0.85) and criterion validity are reported to be acceptable (Violence Institute of New Jersey, 2007). The scale has previously been administered to children as young as 6 years old (Defeyter, 2008) through to adolescents aged 16 years (Mynard & Joseph, 2000). The adaptations to some of the scale items in the current study were possibly detrimental to the psychometric properties of some of the subscales,

which fell short of an acceptable level (Cronbach's Alpha Range = .617 - .825; see Appendix M).

#### **3.2.2.5. Negative Treatment of Others**

Children's victimising behaviour towards other pupils was measured using an adapted version of the Multi-dimensional Peer Victimisation Scale. The sixteen items from the Multi-dimensional Peer Victimisation Scale were altered to ask children about how they have acted towards other pupils during the previous two weeks. For example, the original item, "During the last couple of weeks another pupils has kicked me" was changed to "During the last couple of weeks I have kicked another pupil" (see Appendix Liv).

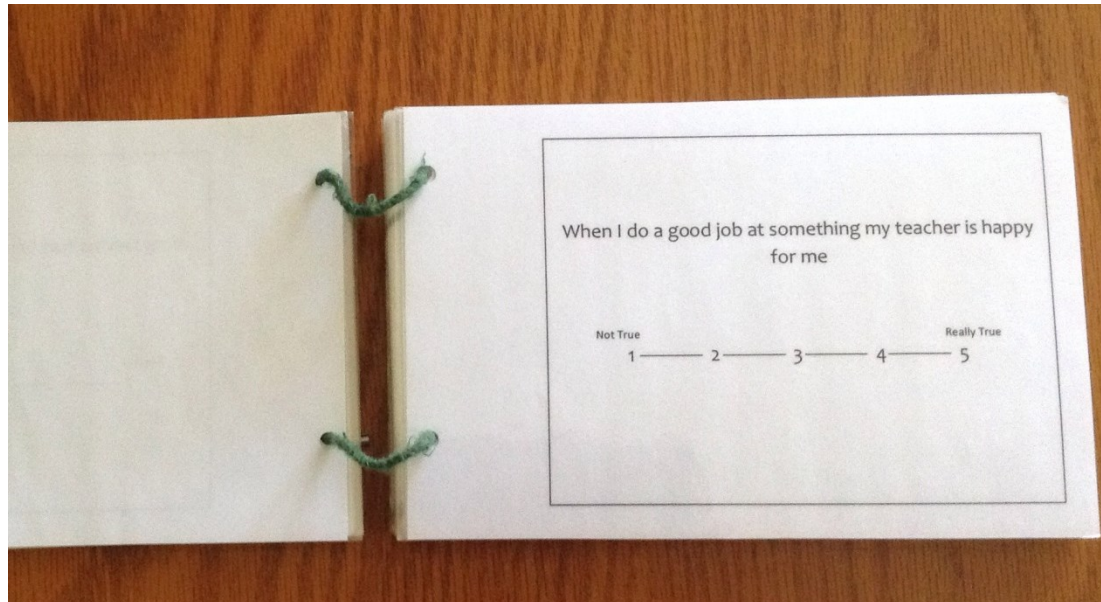
The adapted scale consisted of the same four sub scales as the Multi-dimensional Peer Victimisation Scale: Physical Victimisation, Social Manipulation, Verbal Victimisation and Attacks on Physical Property. Also, children were asked to specify how often they had carried out each behaviour using the same three point scale as the one used for the Multi-dimensional Peer Victimisation Scale. A higher score suggested that a child had subjected other pupils to more incidents of victimisation. Following the same pattern as the other scales used within Study 2, some of the subscales in the negative treatment measure fell short of an acceptable level of reliability (Cronbach's Alpha Range = .540 - .825; see Appendix M).

#### **3.2.3. Procedure**

Children were taken individually to a quiet area of the school where they were seated at a desk with the researcher to complete the measures.

Children were presented with a booklet, which displayed each questionnaire

item with the relevant response scale on individual pages (see Figure 3.1). As the researcher read out each questionnaire item, children responded verbally while following the questionnaires in the booklet. The researcher recorded children's answers in anonymous questionnaire booklets.



**Figure 3.1:** Questionnaire booklet for children.

To ensure that children were not seated for a prolonged period of time, completion of the measures was conducted across two 20 minute testing sessions. During the first testing session, children completed their list of friends and the Friendship Qualities Scale followed by the Multi-dimensional Peer Victimisation Scale. In the second testing session, children completed the Relationship with Teacher measure followed by the Negative Treatment of Others measure. Additionally, children listed the out of school clubs they attended at the time of testing.

Children completed all measures at three time points. Time 1 measures were completed between March and July 2010. Six months following completion of the Time 1 measures, Time 2 measures were taken between

September 2010 and January 2011. Time 3 measures were completed between March and July 2011, 12 months following the completion of Time 1 measures.

#### **3.3.4. Data Analysis**

As mentioned previously a large number of children switched groups across the study period, which resulted in data being analysed across a six month period rather than 12 months as originally planned. Time 1 and Time 2 data were used for 60 children who remained in the same study group at these two time points. It was necessary to use Time 2 and Time 3 data for 28 children as they switched groups between Time 1 and Time 2 but remained in the same group between Time 2 and Time 3. For consistency in the reporting of analyses and results, the first data time point used for each child was labelled Time 1 and the second time point was labelled Time 2.

For the number of friends reported by children and for each subscale of each relationship measure, initial comparisons were made between groups at Time 1 to determine whether groups differed from one another from the outset. Comparisons were then made within groups across time to see whether scores on each measure changed between Time 1 and Time 2. Finally, scores were compared between groups at Time 2 to look at whether any differences identified between groups at Time 1 remained at Time 2.

The small group sizes and significant Shapiro-Wilk analyses meant that the data did not meet the requirements for the use of parametric tests; non-parametric analyses were therefore used throughout.

### 3.4. Results

#### 3.4.1. Number of Friends

Kruskall-Wallis analyses conducted on Number of Friends data showed significant differences between groups at Time 1 ( $H(3) = 3.503$ ;  $p = .044$ ). However, follow up Mann Whitney U tests carried out to identify which groups differed from one another in terms of Number of Friends identified no significant differences between any of the groups when the alpha level was adjusted to 0.008 to account for the number of comparisons made (i.e. 0.05/6). Table 3.3 shows the results of the Mann Whitney U tests.

**Table 3.3:** Mann Whitney U tests conducted on Time 1 Number of Friends data ( $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=102.50$ ; $p=.052$	$U=58.50$ ; $p=.211$	$U=219.50$ ; $p=.127$
After School Club		$U=66.00$ ; $p=.035$	$U=421.50$ ; $p=.785$
Both			$U=122.50$ ; $p=.025$

Kruskall Wallis analyses of Time 2 Number of Friends data showed no significant differences between groups ( $H(3) = 4.003$ ;  $p = .261$ ). Similarly, Wilcoxon Signed Ranks Tests identified no differences between Time 1 and Time 2 Number of Friends scores within groups for the Breakfast Clubs ( $Z = -$

.171;  $p = .864$ ), Both ( $Z = -.402$ ;  $p = .688$ ) and None groups ( $Z = -.551$ ;  $p = .582$ ). A significant difference between Number of Friends reported at Time 1 and Time 2 was identified for the After School Clubs group ( $Z = -2.094$ ;  $p = .036$ ). Further investigation of the data collected on the Number of Friends reported by the After School Clubs group showed that the median scores for Time 1 and Time 2 were the same but the ranked scores showed that there were a greater number of children reporting more friends at Time 2 than Time 1 ( $n = 15$ ) than children reporting more friends at Time 1 than Time 2 ( $n = 4$ ) or the same number of friends at both time points ( $n = 3$ ). Median and range of scores for Number of Friends reported by each group are presented in Table O1 (Appendix O).

#### **3.4.2. Time Spent with Best Friend**

Kruskall Wallis comparisons made between groups in terms of the amount of free time children spent with their best friend showed no significant differences between groups at Time 1 ( $H(3) = .976$ ;  $p = .807$ ) or Time 2 ( $H(3) = 2.160$ ;  $p = .540$ ). Further analyses showed no significant differences in the amount of free time children spent with their best friend between Time 1 and Time 2 within the Breakfast Clubs ( $Z = -.816$ ;  $p = .414$ ), After School Clubs ( $Z = -.447$ ;  $p = .655$ ), Both ( $Z = -.816$ ;  $p = .414$ ) and None groups ( $p = -.225$ ;  $p = .822$ ). Table O2 (Appendix O) shows the median and range of scores for time spent with best friend for each group.



### **3.4.3. Friendship Qualities Scale**

#### **3.4.3.1. Companionship**

Analysis showed no significant differences between groups for Companionship at Time 1 ( $H(3) = 1.498$ ;  $p = .693$ ) or Time 2 ( $H(3) = 2.943$ ;  $p = .400$ ). When Companionship scores were analysed across time, no significant differences emerged between Time 1 and Time 2 for the Breakfast Clubs group ( $Z = -.836$ ;  $p = .403$ ), After School Club group ( $Z = -1.684$ ;  $p = .092$ ), Both group ( $Z = -1.017$ ;  $p = .309$ ) or the None group ( $Z = -.679$ ;  $p = .497$ ). The median and range of scores for Companionship are shown in Table O3 (Appendix O).

#### **3.4.3.2. Help**

No significant differences were identified between groups for Help at Time 1 ( $H(3) = 2.539$ ;  $p = .468$ ) or Time 2 ( $H(3) = 1.593$ ;  $p = .661$ ). Similarly, there were no significant differences between Time 1 and Time 2 scores for the Breakfast Clubs group ( $Z = -.223$ ;  $p = .823$ ), After School Clubs group ( $Z = -.701$ ;  $p = .483$ ), Both group ( $Z = -.358$ ;  $p = .720$ ) or the None group ( $Z = -.072$ ;  $p = .942$ ). Table O4 (Appendix O) presents the median and range of scores for Help.

#### **3.4.3.3. Security**

Analysis of scores from the Security subscale showed no significant differences between groups at Time 1 ( $H(3) = .632$ ;  $p = .889$ ) or Time 2 ( $H(3) = 2.188$ ;  $p = .534$ ). Analysis of Security scores across time showed no significant differences between Time 1 and Time 2 for the Breakfast Clubs ( $Z = -.819$ ;  $p = .413$ ), After School Clubs ( $Z = -.078$ ;  $p = .938$ ), Both ( $Z = .000$ ;  $p$

>.05) or None groups ( $Z = -.903$ ;  $p = .366$ ). The median and range of scores for Security are shown in Table O5 (Appendix O).

#### **3.4.3.4. Closeness**

For Closeness, there were no significant differences between groups at Time 1 ( $H(3) = 2.570$ ;  $p = .463$ ). Between groups analysis conducted on Time 2 Closeness data approached significance but fell short of the adjusted alpha level of 0.01 ( $H(3) = 8.617$ ;  $p = .035$ ). There were also no significant differences between Time 1 and Time 2 Closeness scores collected from Breakfast Clubs ( $Z = -.562$ ;  $p = .574$ ), Both ( $Z = -.631$ ;  $p = .528$ ) and None ( $Z = -1.234$ ;  $p = .217$ ) groups. Analysis of the After School Club group scores showed a significant difference between Time 1 and Time 2 Closeness scores ( $Z = -2.803$ ;  $p = .005$ ) with children reporting higher Closeness scores at Time 1 ( $Mdn = 24.00$ ) than at Time 2 ( $Mdn = 16.00$ ). Table O6 (Appendix O) presents the median and range of scores calculated for Closeness.

#### **3.4.3.5. Conflict**

For Conflict, analyses showed no significant differences between groups at Time 1 ( $H(3) = 1.073$ ;  $p = .784$ ) and Time 2 ( $H(3) = .785$ ;  $p = .853$ ). Analyses conducted across time showed no significant differences between Time 1 and Time 2 Conflict scores for Breakfast Clubs ( $Z = -.312$ ;  $p = .755$ ), After School Clubs ( $Z = -1.049$ ;  $p = .294$ ), Both ( $Z = -.119$ ;  $p = .905$ ) and None ( $Z = -.248$ ;  $p = .804$ ) groups. Median and range of Conflict scores are shown in Table O7 (Appendix O).

### **3.4.3.6. Emotional Quality**

No significant differences were identified between groups at Time 1 ( $H(3) = 3.503$ ;  $p = .320$ ) or Time 2 ( $H(3) = 4.098$ ;  $p = .251$ ) for Emotional Quality.

Analyses conducted across time showed no significant differences between Time 1 and Time 2 scores for Breakfast Clubs ( $Z = -.735$ ;  $p = .462$ ), Both ( $Z = .000$ ;  $p > .05$ ) and None ( $Z = -1.215$ ;  $p = .224$ ) groups. There was a significant difference between Time 1 and Time 2 Emotional Quality scores for the After School Clubs group ( $Z = -3.184$ ;  $p = .001$ ) with children reporting higher Emotional Quality at Time 1 ( $Mdn = 70.50$ ) than at Time 2 ( $Mdn = 57.00$ ). The median and range of scores for Emotional Quality are presented in Table O8 (Appendix O).

### **3.4.4. Quality of Relationship with Class Teacher**

#### **3.4.4.1. Companionship**

Kruskall Wallis analysis of data collected at Time 1 showed a significant difference between groups for Companionship ( $H(3) = 12.622$ ;  $p = .006$ ).

Follow up Mann Whitney U tests conducted to determine which groups differed from each other for Companionship showed a significant difference between the After School Clubs and Both groups with the Both group ( $Mdn = 9$ ) reporting greater Companionship with their class teacher than the After School Clubs group ( $Mdn = 6$ ). A significant difference was also identified between the Both and None groups at Time 1 with the Both group ( $Mdn = 9$ ) reporting greater Companionship with their class teacher than the None group ( $Mdn = 7$ ). Median and range of scores and results of the Mann Whitney U comparisons are shown in Table O9 (Appendix O) and Table 3.4 respectively. No significant differences emerged between groups for

Companionship at Time 2 ( $H(3) = 7.476$ ;  $p = .058$ ). Furthermore, no significant differences were identified between Time 1 and Time 2 Companionship scores for the Breakfast Clubs ( $Z = -.849$ ;  $p = .396$ ), After School Clubs ( $Z = -1.002$ ;  $p = .316$ ), Both ( $Z = -1.994$ ;  $p = .046$ ) or None ( $Z = -.290$ ;  $p = .772$ ) groups.

**Table 3.4:** Mann Whitney U tests conducted on Time 1 Companionship with class teacher scores (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=105.00$ ; $p=.061$	$U=61.50$ ; $p=.273$	$U=221.50$ ; $p=.207$
After School Club		$U=33.00$ ; $p=.001^*$	$U=352.00$ ; $p=.306$
Both			$U=92.00$ ; $p=.005^*$

#### 3.4.4.2. Help

No significant differences between groups were identified at Time 1 ( $H(3) = 1.548$ ;  $p = .671$ ) or Time 2 ( $H(3) = 6.159$ ;  $p = .104$ ) for Help scores. Similarly, analyses showed no significant differences between Time 1 and Time 2 Help scores for the Breakfast Clubs ( $Z = -.601$ ;  $p = .548$ ), After School Clubs ( $Z = -.383$ ;  $p = .702$ ), Both ( $Z = -.339$ ;  $p = .734$ ) and None ( $Z = -1.235$ ;  $p = .217$ ) groups. The median and range of scores for Help from class teacher are presented in Table O10 (Appendix O).

#### **3.4.4.3. Security**

For Security, no significant differences were apparent between groups at Time 1 ( $H(3) = 5.335$ ;  $p = .149$ ) and Time 2 ( $H(3) = 4.099$ ;  $p = .251$ ) and no significant differences were identified between Time 1 and Time 2 scores for the Breakfast Clubs ( $Z = -.237$ ;  $p = .813$ ), After School Clubs ( $Z = -1.140$ ;  $p = .254$ ), Both ( $Z = -1.199$ ;  $p = .230$ ) and None ( $Z = -.548$ ;  $p = .584$ ) groups. Table O11 (Appendix O) shows the median and range of scores for Security from class teacher.

#### **3.4.4.4. Closeness**

Analyses of Closeness data collected at Time 1 ( $H(3) = 2.960$ ;  $p = .398$ ) and Time 2 ( $H(3) = 4.466$ ;  $p = .215$ ) showed no significant differences between groups at both time points. Further analysis showed no significant differences between Time 1 and Time 2 Closeness scores for the Breakfast Clubs ( $Z = -1.262$ ;  $p = .207$ ), Both ( $Z = -.356$ ;  $p = .722$ ) and None ( $Z = -.987$ ;  $p = .324$ ) groups. For the After School Clubs group a significant difference was identified between Closeness scores collected at Time 1 and Time 2 ( $Z = -2.779$ ;  $p = .005$ ) with children reporting higher Closeness scores at Time 1 ( $Mdn = 21.00$ ) than at Time 2 ( $Mdn = 18.00$ ). Table O12 (Appendix O) shows the median and range of scores calculated for Closeness to class teacher.

#### **3.4.4.5. Conflict**

Data collected on Conflict showed no significant differences between groups at Time 1 ( $H(3) = 2.358$ ;  $p = .502$ ) and Time 2 ( $H(3) = .982$ ;  $p = .806$ ).

Moreover, no significant differences were found within the Breakfast Clubs ( $Z = -1.249$ ;  $p = .212$ ), After School Clubs ( $Z = -.857$ ;  $p = .391$ ), Both ( $Z = -$

1.382;  $p = .167$ ) or None ( $Z = -1.165$ ;  $p = .244$ ) groups between Time 1 and Time 2 Conflict scores. The median and range of scores for Conflict with class teacher are shown in Table O13 (Appendix O).

#### **3.4.4.6. Emotional Quality**

Analysis of Emotional Quality showed no significant differences between groups at Time 1 ( $H(3) = 4.208$ ;  $p = .240$ ) and Time 2 ( $H(3) = 5.351$ ;  $p = .148$ ) and no significant differences between Time 1 and Time 2 scores within the Breakfast Clubs ( $Z = -.504$ ;  $p = .614$ ), After School Clubs ( $Z = -1.461$ ;  $p = .144$ ), Both ( $Z = -1.023$ ;  $p = .306$ ) and None ( $Z = -.967$ ;  $p = .334$ ) groups. Table O14 (Appendix O) presents the median and range of scores for Emotional Quality.

#### **3.4.5. Multidimensional Peer Victimisation Scale**

##### **3.4.5.1. Overall**

Kruskall Wallance comparisons showed no significant differences were between groups for Overall Peer Victimisation at Time 1 ( $H(3) = 4.781$ ;  $p = .189$ ) and Time 2 ( $H(3) = 4.248$ ;  $p = .236$ ). Furthermore, Wilcoxon Signed Ranks tests showed no significant differences between Time 1 and Time 2 Overall Peer Victimisation scores for Breakfast Clubs ( $Z = -1.021$ ;  $p = .307$ ), After School Clubs ( $Z = -1.310$ ;  $p = .190$ ), Both ( $Z = -1.249$ ;  $p = .212$ ) and None ( $Z = -.928$ ;  $p = .554$ ) groups. Table O15 (Appendix O) shows the median and range of scores for Overall Peer Victimisation.

##### **3.4.5.2. Physical**

When the subscales of the Peer Victimisation Scale were considered separately no significant differences emerged between groups for Physical

Victimisation at Time 1 ( $H(3) = 6.917$ ;  $p = .075$ ) or Time 2 ( $H(3) = 1.602$ ;  $p = .659$ ). When data were considered across time, analyses showed no significant differences between Time 1 and Time 2 Physical Victimisation data for Breakfast Clubs ( $Z = -1.543$ ;  $p = .123$ ), After School Clubs ( $Z = -.636$ ;  $p = .525$ ), Both ( $Z = -1.706$ ;  $p = .088$ ) and None ( $Z = -.550$ ;  $p = .583$ ) groups. The median and range of scores for Physical Victimisation are presented in Table O16 (Appendix O).

#### **3.4.5.3. Social**

For the Social Victimisation subscale, analyses showed no significant between groups differences for data collected at Time 1 ( $H(3) = 4.759$ ;  $p = .190$ ) and Time 2 ( $H(3) = 1.876$ ;  $p = .598$ ). Moreover, no significant differences were found within the Breakfast Clubs ( $Z = -.270$ ;  $p = .787$ ), After School Clubs ( $Z = -.248$ ;  $p = .804$ ), Both ( $Z = -.897$ ;  $p = .370$ ) and None ( $Z = -1.651$ ;  $p = .099$ ) groups when Time 1 and Time 2 Social Victimisation scores were compared. The median and range of scores for Social Victimisation are shown in Table O17 (Appendix O).

#### **3.4.5.4. Verbal**

No significant differences were identified between groups at Time 1 ( $H(3) = 5.354$ ;  $p = .148$ ) and Time 2 ( $H(3) = 4.919$ ;  $p = .178$ ) for Verbal Victimisation. Similarly, no significant differences were apparent for the Breakfast Clubs ( $Z = -1.136$ ;  $p = .256$ ), After School Clubs ( $Z = -1.437$ ;  $p = .151$ ), Both ( $Z = -1.807$ ;  $p = .071$ ) and None ( $Z = -.306$ ;  $p = .760$ ) groups when Time 1 and Time 2 Verbal Victimisation scores were compared within groups. Table O18 (Appendix O) presents the median and range of scores for Verbal Victimisation.

#### **3.4.5.5. Property**

For Property Victimisation, there were no significant differences between groups for data collected at Time 1 ( $H(3) = 4.707$ ;  $p = .195$ ) and Time 2 ( $H(3) = 2.660$ ;  $p = .447$ ). Further analysis showed no significant differences between Time 1 and Time 2 data within the Breakfast Clubs ( $Z = -.415$ ;  $p = .679$ ), After School Clubs ( $Z = -.543$ ;  $p = .587$ ), Both ( $Z = -1.804$ ;  $p = .279$ ) and None ( $Z = -.453$ ;  $p = .651$ ) groups. The median and range of scores for Property Victimisation are shown in Table O19 (Appendix O).

#### **3.4.6. Negative Treatment of Others**

##### **3.4.6.1. Overall**

No significant differences were identified between groups at Time 1 ( $H(3) = 2.598$ ;  $p = .458$ ) or Time 2 ( $H(3) = .631$ ;  $p = .889$ ) for Overall Negative Treatment of Others. Similarly no significant differences were identified between Time 1 and Time 2 scores within the Breakfast Clubs ( $Z = -1.283$ ;  $p = .199$ ), After School Clubs ( $Z = -.868$ ;  $p = .386$ ), Both ( $Z = -.674$ ;  $p = .500$ ) and None ( $Z = -.822$ ;  $p = .411$ ) groups. Table O20 (Appendix O) presents the median and range of scores for Overall Negative Treatment of Others.

##### **3.4.6.2. Physical**

Analysis of the Time 1 ( $H(3) = 1.674$ ;  $p = .643$ ) and Time 2 ( $H(3) = 2.212$ ;  $p = .530$ ) Physical Negative Treatment of Others scores showed no significant differences between groups. Further analysis showed no differences between Time 1 and Time 2 scores when comparisons were made within the Breakfast Clubs ( $Z = -.211$ ;  $p = .833$ ), After School Clubs ( $Z = -.557$ ;  $p = .577$ ), Both ( $Z = -.447$ ;  $p = .655$ ) and None ( $Z = -.620$ ;  $p = .535$ ) groups. The



median and range of Physical Negative Treatment of Others scores are shown in Table O21 (Appendix O).

#### **3.4.6.3. Social**

For Social Negative Treatment of Others no significant differences emerged between groups at Time 1 ( $H(3) = 1.564$ ;  $p = .668$ ) or Time 2 ( $H(3) = .043$ ;  $p = .998$ ). Moreover, no significant differences were identified between Time 1 and Time 2 scores for the Breakfast Clubs ( $Z = -1.474$ ;  $p = .140$ ), After School Clubs ( $Z = -.618$ ;  $p = .537$ ), Both ( $Z = -.412$ ;  $p = .680$ ) and None ( $Z = -1.427$ ;  $p = .154$ ) groups. Table O22 (Appendix O) presents the median and range of scores for Social Negative Treatment of Others.

#### **3.4.6.3. Verbal**

Analysis showed no significant differences between groups at Time 1 ( $H(3) = 2.496$ ;  $p = .476$ ) or Time 2 ( $H(3) = 1.608$ ;  $p = .658$ ) for Verbal Negative Treatment of Others. Similarly, no significant differences were apparent between Time 1 and Time 2 scores within the Breakfast Clubs ( $Z = -.259$ ;  $p = .796$ ), After School Clubs ( $Z = -1.807$ ;  $p = .071$ ), Both ( $Z = -.378$ ;  $p = .705$ ) and None ( $Z = -.046$ ;  $p = .963$ ) groups. The median and range of scores for Verbal Negative Treatment of Others are presented in Table O23 (Appendix O).

#### **3.4.6.4. Property**

Finally, analysis of Property Related Negative Treatment of Others showed no significant differences between groups at Time 1 ( $H(3) = 1.362$ ;  $p = .714$ ) or Time 2 ( $H(3) = .833$ ;  $p = .842$ ). Furthermore, no significant differences were identified within the Breakfast Clubs ( $Z = -1.289$ ;  $p = .107$ ), After School

Clubs ( $Z = -.816$ ;  $p = .414$ ), Both ( $Z = -.816$ ;  $p = .414$ ) and None ( $Z = -.071$ ;  $p = .943$ ) groups when Time 1 and Time 2 scores were compared. The median and range of scores for Property Related Negative Treatment of Others are shown in O24 (Appendix O).

### **3.5. Discussion**

The current study set out to investigate whether there is an association between breakfast club attendance and children's social relationships across time looking specifically at children's experiences of their relationships with their peers and teachers. The measures used allowed a broad range of relationship factors to be considered but very few significant results were identified with differences emerging mainly within the After School Clubs group when scores were considered across time. The After School Clubs group showed an increase in the number of friends reported between Time 1 and Time 2. However, in terms of Friendship Quality, the After School Clubs group also showed declines in Closeness and Emotional Quality in addition to reductions in Closeness to class teachers across time. Although these differences emerged between Time 1 and Time 2 within the After School Clubs group, scores did not alter enough to lead the After School Clubs group to differ significantly from the other groups at Time 1 or Time 2 suggesting that attendance at After School Clubs did not emerge as beneficial or disadvantageous to children's relationships compared to the other groups investigated. For Companionship with class teachers the Both group reported higher scores than the After School Clubs group and the None group at Time 1. As Companionship is a measure of the amount of

voluntary time people spend together, it may be the case that children in the Both group had more opportunities to see their class teachers while spending time in school before and after the formal school day thus leading them to report greater levels of Companionship with their class teachers. However, these differences cannot be attributed completely to time spent in school as no significant difference emerged for Companionship with teachers between the Breakfast Clubs group and the Both group. It should also be noted that where significant differences were evident between groups these did not remain across time. Due to such a lack of consistency across results, the few significant findings that were identified within the current study should be treated with caution. Moreover, no further significant differences were reported, which suggests that, in relation to the aims of the current study, breakfast club attendance was not associated with any changes in children's social relationships across time.

Whilst the current findings suggest that there is no association between children's breakfast club attendance and the quality of their friendships, it is possible that utilisation of the Friendship Qualities Scale, which focuses on 'best' friendships, was too specific in the context of the current study. Previous research has suggested that supportive peers within out of school club contexts may be a key determinant of the benefits that children gain from attending such clubs (Mahoney & Stattin, 2000); thus rather than investigating the quality of children's friendships in relation to their out of school club attendance only, it may be fruitful to also consider the quality of children's relationships with peers they spend time with in different activities. In considering this, a more valid method of determining whether a

relationship exists between children's breakfast club attendance and the quality of their friendships could be to compare the quality of children's friendships with peers who attend the same out of school clubs to the quality of their friendships with non-attending peers matched on similar variables.

A further issue that might have compromised the findings of the current study is that the reliability of some of the subscales within the questionnaires fell below an acceptable level of 0.7 (Field, 2006). This could have been due to the wording of scale items being adapted but it should also be considered that having only a small number of items within a subscale can also lower the reported Cronbach Alpha level (de Vaus, 2002). It therefore may be necessary in future studies of this nature to utilise scales that include a greater number of items to improve reliability or to pilot the adapted versions of the scales before they are used to address a particular research question.

Despite the lack of significant findings, the current study offers an important contribution to the research literature by highlighting the challenges associated with investigating outcomes relating to children's out of school club attendance over time. Poulin and Denault (2013) suggested that longitudinal studies of this nature are required within the out of school clubs context to establish the impact of attendance at out of school clubs on children's relationships. An effort was made within the current study to look at children's relationships across a 12-month period but due to contamination owing to a large proportion of children switching between groups, analysis of data collected over one year was not possible. The problems arising from the current longitudinal methodology reflect issues reported in previous studies of breakfast clubs. For example, in a cluster randomised controlled

trial involving 111 schools, ten schools allocated to the intervention group did not set up a breakfast club when required to do so and five of the control group schools chose to set up a breakfast club before the end of the 12-month follow-up period (Murphy et al., 2010). Similarly, in a randomised controlled trial by Shemilt et al (2004) 72.2% of children in the intervention group and 77% of children in the control group had access to a breakfast club on their school site by the 12-month follow-up point making the planned intention to treat analysis impossible to conduct. The current study shows that even when study groups are self-selected and not set up experimentally a high level of contamination between groups can occur in a short period of time. A further challenge encountered within the current study was that there was a limited amount of information available on the different clubs running on school sites. School staff were able to confirm that clubs listed by children took place on school premises but they were unable to provide details of children's attendance at different clubs so it was not possible to include the duration and intensity of children's out of school club attendance as covariates in analyses of the data. This was often because clubs were organised by different staff members, some of whom were temporary and in some cases clubs were organised on the school site by external agencies so attendance records were not available to the school. Again, this issue reiterates a point covered by Shemilt et al who found that Local Authorities held inaccurate records on school breakfast provision thus demonstrating that there are important factors relating to practical research that can have a substantial impact on research designs that are beyond the control of the researcher.

In light of the current study providing further evidence to show that children's out of school club attendance can be variable it is imperative that more research is conducted to look at the reasons for children's attendance at different clubs. In Study 1 (Chapter 2) of the current thesis it was evident that breakfast club provision was often utilised as a means of childcare to support working parents thus it is possible that for many children out of school club attendance is changeable depending on their parents' work shift patterns. Until research is conducted to track the duration of children's attendance at out of school clubs and to look at reasons for children's group switching behaviours it is not possible to determine how long children need to attend clubs before benefits can be identified.

In conclusion, the current study found no evidence to suggest that breakfast club attendance is associated with the quality of children's relationships with their best friends and class teachers and their experiences of peer victimisation either as a victim or perpetrator. However, social relationships were discussed as a key advantage of breakfast club attendance in Study 1 (Chapter 2) of the current thesis thus it is imperative that further research is conducted to investigate other aspects of social relationships beyond relationship quality and peer victimisation. The findings of Study 1 (Chapter 2) showed that breakfast clubs allow children to spend time in a supportive environment with peers and staff that they might not otherwise be able to spend time with throughout the school day. Moreover, children attending breakfast clubs have unique opportunities to interact with members of the wider school community (i.e. peers from other year groups, support staff) that they would be unlikely to encounter during a typical school day. On the

contrary, it was also suggested in Study 1 (Chapter 2) that the time children spend in breakfast clubs could impede on family time and children's relationships with their parents. For these reasons, Study 3 (Chapter 4) will investigate children's perceptions of social support in relation to their breakfast and after school club participation. Specifically, Study 3 (Chapter 4) will look at different dimensions of social relationships than those investigated within the current chapter and will look additionally at children's relationships with a broader range of key member of their social networks.

Finally, the present study detailed the tremendous difficulties linked to studying outcomes related to children's out of school club attendance over time leading to the proposal that more research is needed to investigate longitudinal patterns of out of school club attendance in detail before a beneficial level of attendance for children can be established. For this reason, successive studies presented within the current thesis will adopt a cross sectional methodology. Cross sectional methods have been criticised in the past as the findings do not demonstrate cause and effect (Mann, 2003) but their use is justifiable within the current thesis where the overarching aim of the studies presented is not to specifically establish cause and effect by manipulating variables but rather to investigate the potential for the existence of a relationship between breakfast club attendance and outcomes related to children's social relationships and behaviour within a complex, 'real-world' setting. It has been argued that such settings present challenges that can result in more robust methods, such as randomised controlled trials, being unfeasible thus it is important to consider the context of the evaluation and

select the most robust method of investigation according to the circumstances being studied (Bonell et al., 2009; Dunt, 2010).



## **CHAPTER 4: Does breakfast club attendance make a difference to children's perceptions of social support and school engagement?**

### **4.1. Introduction**

In Study 1 (Chapter 2) of the current thesis, children, parents and school staff highlighted the numerous benefits that children encountered through breakfast club attendance. One such benefit that was identified was the support that is readily available to children within the breakfast club setting; for example it was suggested that there is always a member of breakfast club staff available for children to speak to if they arrive at school needing help or someone to talk to. However, some school staff interviewed in Study 1 also expressed concerns that children who attend breakfast clubs and other school clubs outside of school time are missing out on valuable time at home with their parents. This is interesting as there is a growing body of evidence to suggest that the support that children receive from different members of their social network plays an important role in their wellbeing. However, no published research studies to date have considered whether a relationship exists between children's breakfast club attendance and their perceptions of the support they receive from others.

Malecki and Demaray (2003) defined social support as "an individual's perceptions of general support or specific supportive behaviors (available or acted on) from people in their social network, which enhances their functioning or may buffer them from adverse outcomes" (p. 232). Within their definition Malecki and Demaray referred to perceptions of support; they argued that children's perceptions should be used as the predominant

measure of social support as there are aspects of support such as feelings and emotions that cannot be observed or objectively measured.

Furthermore, as suggested by Malecki and Demaray's definition, social support has been linked to numerous beneficial outcomes for children and adolescents. For example, Eather, Morgan and Lubans (2013) identified an association between social support from teachers and changes in physical activity participation in a group randomised controlled trial conducted to evaluate the Fit-4-Fun program. Fit-4-Fun aimed to increase children's engagement in vigorous physical activity by enhancing their physical activity enjoyment and self-efficacy beliefs, promoting social support from teacher, parents and peers and improving the school environment through provision of tasks and equipment to be used during break times. Two-hundred-and-twenty-six children from grades 5 and 6 (mean age = 10.7 years) were recruited from four schools in Australia. Two schools were randomised to the treatment condition. Children in the treatment condition received a 60-minute physical activity class delivered by a trained member of the research team once per week for eight weeks in addition to a family partnership programme that incorporated physical activity tasks and goal setting exercises for families to complete at home. Students were also encouraged to engage in physical activity during school break times. Children in the remaining two schools were allocated to the control condition and received their usual 60-minutes of physical activity delivered by their class teacher each week for eight weeks. Children completed questionnaires at baseline, after three-months and after six-months of programme implementation. Questionnaires were used to gather information on demographics (i.e. age,

sex, first language and country of birth), children's experiences of fitness testing (i.e. 'Have you ever participated in a fitness test?'), self-efficacy (e.g. 'I can be physically active even if it is hot or cold outside'), enjoyment (e.g. 'When I am physically active it is no fun at all'), social support (e.g. 'During a typical week how often do your friends do physical activity or play sport with you?') and the physical activity environment (e.g. 'There is sports equipment available for students to use during recess and lunch breaks?') Results of the evaluation showed that after six months the treatment group had improved their cardio-respiratory fitness, body composition, flexibility, muscular fitness and physical activity level. After three months the treatment group perceived improvements in the school environment but no differences were apparent for self-efficacy, enjoyment and social support. However, after six months, significant improvements in children's perceptions of the school environment, teacher social support and enjoyment were observed. Further analyses showed that teacher social support had a mediating effect on physical activity levels. The authors concluded that social support from teachers should be encouraged as a means of improving physical activity in the home and school environments.

In a slightly earlier study, Wang and Eccles (2012) found that social support had a positive influence on school engagement. School engagement is a multifaceted construct that has been defined according to three types of engagement: behavioural, emotional and cognitive (Fredricks, Blumenfeld & Paris, 2004). Behavioural engagement refers to children's active participation in class and the wider school community so engagement is gauged according to behaviours such as involvement in class discussions,

skipping school and participation in extra-curricular activities. Emotional engagement considers children's feelings towards their school work, their teachers, classmates and school in general. Cognitive engagement is concerned with children's willingness to learn and their responses to success and failure. Numerous studies have measured engagement according to one or two of these three types of engagement (e.g. Willms, 2003; Chen & Astor, 2011); however, Fredricks et al. argued that all three types of engagement should be considered as these components are "dynamically interrelated" (p. 61). Wang and Eccles conducted a longitudinal study of 1479 adolescents from 23 middle and high schools near Washington, DC with data being collected when students were in grades 7 (mean age = 12.9 years), 9 (mean age = 14.3 years) and 11 (mean age = 17.2 years). In line with recommendations made by Fredericks et al., Wang and Eccles collected data from adolescents on all three types of school engagement (behavioural, emotional and cognitive) and measured their perceptions of the support they received from peers. Social support from parents and teachers was self-reported i.e. parents rated the support they provided to their children by answering questions such as "How often do your child and you talk about what is going on in his or her life?" and "How often do your child and you talk about problems he or she is having at school" and teachers gave their views on the support they offered to adolescents by answering questions such as "How often do you talk to this student about how things are going in his or her life?" and "How often do you really respect this student's opinions?" All scale items were drawn from a number of previous studies on social support and school engagement (Eccles & Barber, 1999; Furstenberg, Cook, Eccles,

Elder & Sameroff, 1999; Eccles et al, 1993; Mickelson, 1990; Elliot, Huizinga & Menard, 1989). Results of the investigation showed that support from peers, teachers and parents had varying and unique effects on adolescents' school engagement. A positive relationship between parental support and school engagement was found for all aspects of engagement. Teacher support played a key role in reducing declines in school compliance (behavioural engagement), school identification (emotional engagement) and subjective valuing of learning (cognitive engagement). Teacher support had no significant impact on students' participation in extracurricular activities (behavioural engagement). The relationship between peer support and school engagement was more complex and depended on the nature of the peers that students received support from. Those adolescents who received support from antisocial peers reported a negative relationship between peer support and school compliance (behavioural engagement) and the opposite relationship was found for adolescents who reported receiving support from positive peers. A positive relationship between peer support and identification with school (emotional engagement), subjective valuing of learning (cognitive engagement) and participation in extracurricular activities (behavioural engagement) was also reported. The authors concluded that because each source of support makes an independent contribution to school engagement, adolescents can benefit from support received from one source when support from another source is lacking.

Further investigation conducted by Dotterer, McHale and Crouter (2007) established a relationship between school engagement and participation in structured after school activities. One-hundred-and-forty African-American

adolescents from grades 6, 7, 8 and 9 (mean age = 13.07 years) provided ratings on school self-esteem (cognitive engagement), which considered adolescents' feelings towards school-related tasks. School self-esteem was measured through items drawn from the Hare Area-Specific Self Esteem Scale (Hare, 1996) such as "I usually have been proud of my report card" (p. 395). Emotional engagement, which was termed school bonding, measured adolescents' feelings about school and the people in it. School bonding was measured via items such as "You feel close to people at your school" (p. 395) taken from previous research conducted by Fine (1991) and Voelkl (1997). Adolescents also reported on the activities they participated in outside of school time across seven days and these activities were grouped into five categories: academic activities such as reading; homework; sports and extracurricular activities such as structured sports and scout groups; watching television; and hanging out without adult supervision i.e. not participating in any activities. Additional data were collected on adolescents' school grades, which were used to gauge behavioural engagement. Information on family qualities and relationships was gathered through family member interviews. Consideration of the five activity categories showed that adolescents spent most of their time watching television followed by completing homework and participating in sports and extracurricular clubs. The least amount of time was spent on academic activities and hanging out. Analysis of the school engagement data in relation to adolescents' out of school activities showed a positive relationship between participation in extracurricular clubs and school self-esteem with school self-esteem increasing with more time spent in extracurricular activities. Extracurricular

activity participation was also positively related to school bonding. Time spent on homework was a positive predictor of school bonding for boys but no relationship between homework and school bonding was found for girls. Finally, a negative relationship existed between time watching television and school self-esteem, with more time spent watching television resulting in lower ratings of self-esteem. A negative relationship between school bonding and television watching was also found for males only. Dotterer et al. highlighted the advantages of participation in structured out of school activities as their results demonstrated that there is potential for such participation to have a positive impact on school bonding and school self-esteem, which in turn could protect adolescents from involvement in risky behaviours and reduce the likelihood of school dropout.

Overall the conclusions drawn by Wang and Eccles (2012) and Dotterer et al (2007) suggest that social support and participation in structured activities outside of the formal school day are advantageous to adolescents' level of engagement in school. Moreover, further evidence exists, which suggests that support received from activity leaders while participating in structured out of school clubs may be beneficial to activity attendees, particularly when parental support is lacking at home.

Mahoney, Schweder and Stattin (2002) investigated the relationship between depressed mood and support from after school activity leaders in a sample of 537 adolescents, aged 14 years, from Orebro County in Sweden.

Adolescents provided self-reported ratings of depressed mood in addition to information about their after school activity participation and their perceptions of the support they received from after school activity leaders. Based on this

information adolescents were categorised as engaging in either: “1) no activity participation; 2) activity participation without high support from the activity leader; and 3) activity participation with high support from the activity leader” (p. 74). Parent-adolescent detachment was determined according to information provided by parents about their level of involvement in activities with their child (e.g. “How often does the whole family go to visit relatives or friends?” (p. 74)), their knowledge about their child’s involvement in school and leisure activities (e.g. “I know which peers the child is with during his/her free time” (p. 74)) and their communication with their child (e.g. “How often do you sit down and listen to your child when he/she wants to talk about things that happen during his/her free time?” (p. 75)). Adolescents were categorised into low, intermediate and high detachment groups based on the information provided by their parents. Results showed that depressed mood was higher for adolescents in the high detachment group than for adolescents in the intermediate and low detachment groups and higher for those who did not participate in after school activities compared to those who did. In relation to social support, adolescents who perceived a high level of support from their activity leader reported lower levels of depression than those who perceived lower levels of support. Moreover, when after school activity participation and depressed mood were considered within the low, medium and high detached groups, adolescents in the high detached group showed reduced ratings of depressed mood when they took part in after school activities compared to adolescents within the high detached group who did not participate in after school activities. Also, within the high detached group, those adolescents who provided higher ratings of support



from their activity leaders reported lower levels of depressed mood in comparison to those high detached adolescents who gave lower ratings of support from activity leaders. The authors concluded that “psychological and emotional well-being of adolescents may also be improved through participation in after-school activities—particularly when a supportive relationship with the activity leader is perceived” (p. 80). The findings support the conclusions of Wang and Eccles (2012) suggesting that social support is provided independently from different sources and when support from one source is lacking, it can be recompensed through other sources.

Mahoney and Stattin (2000) suggested that social support provided by positive peers, family members and other adults might be the essential component that leads children to reap the benefits of participation in structured activities. However, the over-scheduling hypothesis (e.g. Mahoney, Harris & Eccles, 2006; Fredricks, 2012; Mahoney & Vest, 2012) purports that too much time spent in out of school clubs can be detrimental to children, which echoes staff concerns raised in Study 1 of the current thesis.

According to Mahoney et al (2006), in recent years the media have portrayed the view that children and adolescents have stressful and chaotic lifestyles brought about in part by involvement in too many extracurricular activities, which can be detrimental to their wellbeing and family life. This idea has given rise to the over-scheduling hypothesis, which is based on three assumptions: 1) Children and adolescents participate in activities due to extrinsic pressures from parents, coaches and peers; 2) Time spent in extracurricular activities substantially reduces the amount of time available for families to spend quality time together; 3) Extrinsic pressures to

participate in activities coupled with reduced family time can have detrimental developmental outcomes in terms of adjustment and parent-child relationships for those who spend an excessive amount of time involved in extracurricular activities. In a review of the literature pertaining to child and adolescent out of school activity participation in the USA, Mahoney et al addressed each of the assumptions underlying the over-scheduling hypothesis and found that with regards to the reasons why children and adolescents participate in structured out of school activities “although there are many reasons that underlie youth participation in organized activities, the most common motivations are intrinsic” (p. 5). Mahoney et al found that the most common reason that young people gave for attending out of school activities was because they enjoyed attending. In considering the number of hours children and adolescents spend in out of school activities, Mahoney et al looked at time diary data collected from children and adolescents aged 5 - 18 years as part of the Child Development Supplement of the Panel Study for Income Dynamics and stated that “organized activities do not dominate American young people’s free time. Many alternative free time activities (e.g., educational activities, playing games, and watching television) consume as much or considerably more time” (p. 7). Finally, taking into account previous studies conducted to investigate the relationship between structured out of school activity participation and developmental outcomes, Mahoney et al reported that a positive linear relationship exists between the number of activities or the number of hours per week that children and adolescents spend participating in out of school activities and academic, psychological and social outcomes. Moreover, for those children and

adolescents whose participation in structured activities exceeds 20 hours per week, observed benefits appear to plateau or decline slightly but there is no evidence to suggest that high rates of out of school club participation are a risk to the wellbeing of children and adolescents. Mahoney et al therefore concluded that the evidence in favour of participation in structured out of school clubs outweighs evidence for the over-scheduling hypothesis thus efforts to reduce youth participation in activities are not warranted. Also, at the time of reporting, Mahoney et al suggested that the level of participation required to constitute over-scheduling was undefined.

However, recent research by Fredricks (2012) showed support for the over scheduling hypothesis in a large scale longitudinal study of adolescents in the USA and defined thresholds above which participation in out of school clubs can be detrimental. Fredricks (2012) collected data from an ethnically diverse sample of 13130 male and female students when they were in 10<sup>th</sup> grade and 12<sup>th</sup> grade then again two years after high school. At the first phase of data collection, students completed maths assessments and provided information on the number of extracurricular activities they participated in (i.e. breadth of participation) and the number of hours they spent in activities outside of the school day (i.e. intensity of participation). In 12<sup>th</sup> grade, students' maths skills were tested again so that any progress between 10<sup>th</sup> and 12<sup>th</sup> grade could be determined. Students in 12<sup>th</sup> grade also rated their educational expectations (i.e. how far they expected to progress through the formal education system) on an eight point scale ranging from 1: less than high school graduation to 8: advanced degree). Student grade point averages were collected at 10<sup>th</sup> grade and 12<sup>th</sup> grade.

At the 3<sup>rd</sup> time point, two years following high school, data were collected on high school completion, higher education and employment. In consideration of the breadth of participation in extracurricular activities, 21% of students reported attending no extracurricular activities while the remainder of the sample attended between two and three activities per week. Analysis showed positive correlations between breadth of participation and maths achievement scores, grade point average, educational expectations and educational status two years post-high school. However, beyond a particular threshold, breadth of participation was shown to be detrimental. For students who attended five or more activities per week maths scores declined. Educational expectations and educational status declined for those students who attended seven or more activities per week. In comparison to students who attended no activities, those students who attended more than 9 activities per week had lower maths achievement scores. In terms of intensity of activity participation, 35% of students reported spending no time in extracurricular activities during the school week, 3.3% of students spent 20 hours or more in structured activities and the remainder of the sample participated in activities for an average of five hours per week. Results showed positive relationships between intensity of participation and maths scores, grade point average, educational expectations and educational status following high school though these outcomes declined for students who participated for 14 hours or more. Fredricks (2012) concluded that the majority of American adolescents who participate in extracurricular activities do so at a level that leads to beneficial outcomes for those adolescents. However, Fredricks argued that for a minority of students who take part in

activities to excess, there is a risk for the occurrence of less favourable outcomes and therefore parents and teachers should look out for signs that may indicate that children are involved in too many activities.

A further factor that should be considered in relation to out of school activities is whether the clubs that children attend meet their needs. According to the Person-Environment Fit theory “Individuals are not likely to do well or be motivated if they are in social environments that do not meet their psychological needs” (Eccles et al, 1993; p91). This idea has been applied to the development of children and adolescents under numerous circumstances including the classroom environment (Fraser & Rentoul, 1980) and school to work transition (Swanson & Fouad, 1999). In relation to social support, no studies to date have considered which sources and aspects of support are important to children who attend out of school activities and whether children who attend out of school clubs possess different support needs to those children who do not attend. Such research would be fruitful to the literature on out of school club participation as it would help to inform club leaders about the support that should be provided to children who attend clubs and help club leaders to ensure that they are working to meet the needs of the children who attend.

In sum, the findings presented from previous research demonstrate the importance of social support from numerous sources during childhood and adolescence and suggest that social support might be a key influential factor in the benefits that young people gain from out of school club participation. However, no studies to date have reported on social support in relation to breakfast club attendance. This is surprising given that many breakfast

clubs, like structured out of school clubs that take place after school, require children to come onto school premises outside of normal school hours and spend time with peers and school staff as opposed to engaging in other arrangements such as family time or self-care. A study investigating social support and breakfast club attendance is warranted given that the findings from Study 1 of the current thesis suggest that while breakfast clubs are recognised as a means of support for children in schools, there is potential for children who attend breakfast clubs to miss out on valuable time at home with their parents, which could consequently have an impact on the parent-child relationships. Moreover, as discussed in Chapter 1 of the current thesis, the number of UK primary schools offering activities to children before and after school has increased considerably in recent years (Wilkin, White & Kinder, 2003) but much of the literature surrounding social support and structured out of school club participation has been carried out with adolescents in the USA. The first aim of the current study is therefore to address the limitations in the available research literature by investigating whether breakfast club attendance might be associated with children's perceptions of the frequency and importance of social support that they receive from various members of their social network within a sample of primary school children in the UK.

Moreover, given that improvements in school engagement have been associated with out of school club attendance (Dotterer et al, 2007) and similarly relationships between school engagement and social support have been established (Wang & Eccles, 2013), the second aim of the current study is to investigate whether breakfast club attendance may be associated

with children's perceptions of school engagement. To date, no existing studies have investigated breakfast club attendance in relation to children's perceptions of school engagement.

In investigating these aims it is important to consider the perceptions of children who attend breakfast club in comparison to children who do not attend breakfast club but also to compare these groups to children who attend after school clubs. These comparisons are necessary to look at whether any identified differences can be attributed to a particular group or whether differences are a result of additional time spent in school.

Additionally, inclusion of a group of children who attend both breakfast and after school clubs will allow consideration of whether there is evidence for the over-scheduling hypothesis for children who arrive at school early to attend breakfast club and stay in school for a prolonged period of time to attend after school clubs. Children who attend both breakfast and after school clubs have the potential to partake in 10 or more hours of structured activities per week, i.e. one hour of breakfast club per day plus one hour of after school club per day across five school days would equate to 10 hours of participation. To date, it is unclear whether such high levels of participation are associated with children's perceptions of social support.

## **4.2. Method**

### **4.2.1. Participants**

One-hundred-and-thirty-six children were recruited from five primary schools based in rural areas of the North-East of England. The characteristics of the five participating schools and the areas that the schools resided in are shown in Table 4.1. The study sample consisted of 70 males and 66 females aged

between 7 and 11 years. Thirty-seven children were in school year three, twenty-eight children were in school year four, thirty-four children were in school year five and thirty-seven children were in school year six. Schools were asked for children's dates of birth so that exact ages could be calculated but some schools were not willing to provide this information as they believed they would be breaching confidentiality by disclosing such information from school records. Children's dates of birth could not be collected through parental consent forms as an opt-out method of consent was adopted that required parents to only return forms to school if they wanted to exclude their child from participating in the study.



**Table 4.1:** Characteristics of participating schools and school areas in Study 3.

School Demographics <sup>a</sup>							School Local Area Demographics <sup>b</sup>	
Schools	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	Number of children who participated in current study*	All people of working age claiming a key benefit <sup>c</sup>	% White British
1	425	Community	6.4%	4.3%	9.7%	BC=9 ASC=0 Both=5 None=0	20%	94.1%
2	366	Community	5.2%	1.1%	33.8%	BC=1 ASC=7 Both=3 None=1	20%	94.1%
3	315	Community	6.3%	0%	35.2%	BC=11 ASC=0 Both=1 None=0	21%	94.8%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

\*Groups defined on page 233 (BC=Breakfast Club; ASC=After School Club)

**Table 4.1 continued:** Characteristics of participating schools and school areas in Study 3.

School Demographics <sup>a</sup>						School Local Area Demographics <sup>b</sup>		
Schools	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	Number of children who participated in current study*	All people of working age claiming a key benefit <sup>c</sup>	% White British
4	207	Voluntary Aided	4.8%	2.8%	2.9%	BC=7 ASC=29 Both=10 None=31	20%	94.1%
5	395	Community	24.3%	13.9%	35.2%	BC=4 ASC=0 Both=7 None=0	21%	94.8%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

\*Groups defined on page 233 (BC=Breakfast Club; ASC=After School Club)

The five participating primary schools ran a breakfast club and numerous after school clubs on the school site. Table 4.2 presents information on each participating school's breakfast club and the after school clubs reported by children at each school. Effort was made to collect information on each of the after school clubs listed by children (e.g. length of time each club had been established, intensity of children's participation) but this information was not obtainable for the majority of clubs. On trying to locate this information it became apparent that some clubs were run by short term staff or by external agencies on school premises and it was therefore not possible for schools to easily obtain attendance data. However, a member of staff from each school did confirm which after school clubs reported by children were running at the time the study took place; this resulted in 5 clubs being excluded as they did not run on the school site. Though it was not possible to determine the duration of children's participation in breakfast and after school clubs, the frequency of children's participation in breakfast and after school clubs was reported by children. Two children provided ambiguous responses to the question about their frequency of participation in breakfast club (e.g. 'used to' and 'sometimes') and eight children provided no information about the frequency of their attendance at after school clubs and were therefore withdrawn from the study sample prior to analysis.

**Table 4.2:** Characteristics of breakfast clubs and list of after school clubs for each school in Study 3.

School	Breakfast Clubs						After School Clubs
	Cost	Activities	Breakfast	Led by	Availability	Duration	
1	£3.00 per day	Tabletop activities, toys, outdoor play	Cereal, toast, crumpets, muffins, pancakes, fruit, juice	Playworkers	Mon-Fri 7.30am-9.00am term time and holidays	6 years	Gymnastics; After School Club
2	£2.00 per day	Tabletop activities, computers, skipping, hula hoops, active games e.g. dodge ball	Wholemeal toast and orange juice	Teaching assistants	Mon-Fri 7.45am-9.00am term time only	3 years	Drama; Cooking Club; Film Club; Monday Club; Football; Laptop Club; Dance; Art Club
3	75p per day	Table football, table tennis, table top activities, computers	Cereal, toast, pancakes, waffles, crumpets, fruit, yogurt, cheese and crackers, juice	Teaching Assistants	Mon-Fri 8am-9am term time only	4 years	Football

**Table 4.2 continued:** Characteristics of Study 3 breakfast clubs and list of after school clubs for each school in Study 3.

School	Breakfast Clubs						After School Clubs
	Cost	Activities	Breakfast	Led by	Availability	Duration	
4	£2.50 per day	Drawing, jigsaws, board games	Cereal, toast, juice	Teaching Assistants	Mon-Fri 8.00am-8.50am term time only	5 years	Performing Arts; Eco Club; Football; Choir; Computers; Art; Zumba; Dance; Guitar; Cello; Library Club; Netball; Chinese; French
5	30p per day	Arts and crafts, DVD's, computers, construction, table football	Cereal, toast, juice	Deputy Head Teacher	Mon-Fri 7.45am-8.50am term time only	8 years	Trampoline; Swimming; Netball; Football; Sports Club; Taekwondo

Based on the information collected on children's out of school club participation, children were divided into four groups. Thirty-two children made up the breakfast club attendee group (Breakfast Club). These children attended their school breakfast club for at least one session per week and did not attend any other school clubs outside of school hours. Children in the Breakfast Club group reported attending between one and five breakfast club sessions per week with the average number of sessions attended being between three and four (mean number of sessions attended=3.72 (sd=1.67)). Thirty-six children formed the after school club attendee group (After School Club). These children attended at least one activity per week on their school site at the end of the formal school day and did not attend their school breakfast club. Children in the After School Club group reported attending between one and 10 after school club sessions per week and the average number of after school club sessions was reported to be between two and three (mean number of sessions attended=2.72 (sd=2.15)). Twenty-six children attended their school breakfast club and at least one after school club so made up the both clubs group (Both). Children in the Both group reported attending between three and 15 school club sessions per week and attended between six and seven sessions on average per week (mean number of sessions attended=6.69 (sd=2.69)). The final group was the non-attendee group (None), which consisted of thirty-two children who did not attend any clubs on their school site before or after school. It was not possible to recruit equal numbers of children to represent each group from each school (see Table 4.1). However, the possibility of such a limitation was expected as recruitment difficulties were identified previously within the

current thesis (Study 2, Chapter 3) so effort was made in the current study to recruit schools from similar regional areas to try and control for differences between schools. Furthermore, due to the nature of the research topic, any children who were identified by their school as receiving additional support from adults in the school environment were excluded from participation. This was to prevent such additional support influencing the outcome of children's responses to questions about social support.

#### **4.2.2. Measures**

##### **4.2.2.1. Child and Adolescent Social Support Scale (Malecki & Demaray, 2000):**

The Child and Adolescent Social Support Scale (CASSS) consists of five, 12-item questionnaires, which aim to measure children's perceptions of the support they receive from their parent, teacher, best friend, classmates and the wider school community. Each questionnaire measures four aspects of support: Emotional, Appraisal, Informational and Instrumental. The emotional support sub scale considers the feelings of care, trust and empathy that a child perceives within relationships. Appraisal looks at whether a child receives constructive feedback within their relationships. Informational support pertains to the advice that children receive from others. Finally, instrumental support relates to practical help such as providing equipment to complete a task.

For each questionnaire, children are presented with a series of short sentences relating to the individual identified at the top of the questionnaire, for example, "My teacher treats me fairly". Children are required to rate each

sentence to show how often they believe that they receive the support described and how important it is to them to receive that support. Frequency ratings are made on a six-point scale ranging from “Never” to “Always” and importance ratings are made on a three-point scale ranging from “Not Important” to “Very Important” (see Appendix L). Each sub scale yields a minimum score of three and a maximum score of 18 for frequency of support and a minimum score of three and a maximum score of nine for importance of support for each of the five questionnaires. The scores from each sub scale can be summed to give overall frequency and importance scores for each questionnaire. A higher frequency score suggests that a child believes that they receive support more often than a child with a lower score. Similarly, a higher score for importance suggests that a child perceives support from others to be more important than a child with a lower score. The scale was designed to be administered to children in school grades 3 - 12 (ages 8 - 18 years) and is reported to have a good level of reliability (internal consistency:  $r=.96$ ) and acceptable validity (Demeray & Malecki, 2002).

#### **4.2.2.2. School Engagement Measure-MacArthur Network (Fredricks et al, 2003):**

The School Engagement Measure (SEM) is a 19-item questionnaire, which aims to measure children's perceptions of their own school engagement. Five items measure children's behavioural engagement, which focuses on children's perceived level of their own involvement in academic activity. Six items measure emotional engagement, which looks at children's positive and negative feelings towards various aspects of the school environment. Eight



items measure cognitive engagement, which considers children's commitment to academic tasks. The scale presents children with a series of simple sentences, such as "I feel happy in school", and children are required to decide how often each sentence is true about themselves. Ratings are made on a five-point scale ranging from "Never" to "All of the Time" (see Appendix P).

The emotional engagement subscale yields a minimum score of six and a maximum of 30. The behavioural engagement subscale produces a minimum score of five and a maximum of 25. The cognitive engagement subscale generates a minimum score of eight and a maximum of 40. An overall school engagement score can be gained by summing the total score of each of the engagement subscales. The scale is reported to have adequate internal consistency and validity (Fredricks et al, 2003) and has been designed as a self-completion measure, suitable for children from grade three (8 years old) through to upper elementary school pupils (up to 12 years old).

#### **4.2.3. Procedure**

Children were seated at a desk within a quiet area of their school and were given a booklet containing the research measures, along with an information sheet, which provided a simple outline of the tasks (see Appendix P). The researcher read out the research information to the children and explained their right to withdraw from the study at any time. Following completion of a consent form, those children who opted to take part went on to complete the booklet. Although children were not completely discouraged from talking to their peers during completion of the questionnaires, it was emphasised by

the researcher that they should make their own decisions about their answers and should not discuss them with the people sitting nearby. In addition to completing the questionnaires, children listed all the before and after school clubs they attended at the time of data collection. All children completed the questionnaires independently, though the researcher was available throughout the entire testing session to answer any questions.

On completion of their booklets children were fully debriefed and thanked for their participation. All children were given a pencil and a sticker as a token of appreciation for their contribution to the research. Children were also given a debrief letter to take home for their parent or carer, which provided information about the aims of the research and included contact details that could be used if parents or carers had any questions pertaining to the research or wanted to withdraw their child's data from the study.

#### **4.2.4. Data Analysis**

As the questionnaires were self-completed by children, some items were omitted resulting in a number of participants having incomplete subscales for some of the questionnaires. To account for these missing items and to avoid losing a substantial number of participants from the final analysis, each subscale was analysed separately. This meant that any children who did not complete all items pertaining to a certain subscale were omitted from the analysis conducted only for that particular subscale rather than being completely removed from the final analysis. Given that the data were non-normally distributed (see Appendix Q) and group sizes were unequal, non-parametric analyses were conducted throughout. For each aspect of social support and school engagement between groups comparisons were made

using Kruskal Wallace tests. Any significant between groups differences were followed up with Mann Whitney U tests to determine which groups differed significantly from one another. Taking into consideration that multiple comparisons were conducted on each of the questionnaires, a Bonferroni correction was applied to reduce the possibility of type 1 error. For Kruskal Wallace analyses pertaining to the CASSS subscales an alpha level of 0.0125 was used and for the SEM subscales an alpha level of 0.017 was used to indicate significant differences between groups. For follow up Mann Whitney U comparisons, an adjusted alpha level of 0.008 was used to indicate significance.

### **4.3 Results**

#### **4.3.1. Child and Adolescent Social Support Scale**

##### **4.3.1.1. Frequency of Parental Support**

Analysis showed significant differences between groups for the frequency of overall parental support ( $H(3) = 14.258$ ;  $p = .003$ ), instrumental support ( $H(3) = 14.439$ ;  $p = .002$ ) and informational support ( $H(3) = 16.260$ ;  $p = .001$ ). No significant between groups difference was identified for the frequency of emotional support ( $H(3) = 6.943$ ;  $p = .074$ ). Frequency of appraisal support from parents approached significance but fell slightly short of the adjusted alpha level of 0.0125 ( $H(3) = 9.161$ ;  $p = .027$ ). Table R1 (Appendix R) shows the median and range of scores for each aspect of frequency of parental support with same letter indices used to highlight significant between groups differences.

Follow up Mann Whitney U tests (see Table 4.3) conducted to determine which groups differed significantly from one another showed that for frequency of overall parental support the Breakfast Clubs group ( $Mdn = 65.00$ ) and the Both group ( $Mdn = 64.50$ ) reported receiving support from parents significantly more frequently than the None group ( $Mdn = 58.00$ ). The difference between the After School Clubs group and the None group approached significance but did not reach the adjusted alpha level of 0.008.

**Table 4.3:** Results of Mann Whitney U tests conducted on overall frequency of support from parents (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=393.50$ ; $p=.123$	$U=333.00$ ; $p=.456$	$U=240.50$ ; $p=.001^*$
After School Club		$U=394.00$ ; $p=.373$	$U=358.00$ ; $p=.011$
Both			$U=240.00$ ; $p=.006^*$

The same pattern of results emerged for frequency of informational support with the Breakfast Clubs group ( $Mdn = 17.00$ ) and the Both group ( $Mdn = 17.00$ ) reporting that they received support from parents significantly more frequently than the None group ( $Mdn = 14.00$ ) while the difference between the After School Clubs group and the None group fell slightly short of significance (see Table 4.4)..

**Table 4.4:** Results of Mann Whitney U tests conducted on frequency of informational support from parents (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=408.50$ ; $p=.080$	$U=403.00$ ; $p=1.000$	$U=261.00$ ; $p=.001^*$
After School Club		$U=337.00$ ; $p=.080$	$U=398.00$ ; $p=.039$
Both			$U=204.50$ ; $p=.001^*$

Finally, for instrumental support the Breakfast Clubs group ( $Mdn = 15.00$ ), After School Clubs group ( $Mdn = 15.00$ ) and the Both group ( $Mdn = 15.00$ ) reported receiving support more frequently than the None group ( $Mdn = 13.00$ ). See Table 4.5 for results of the Mann Whitney U analysis carried out on the frequency of instrumental support scores.

**Table 4.5:** Results of Mann Whitney U tests conducted on frequency of instrumental support from parents ( $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=481.50$ ; $p=.329$	$U=375.50$ ; $p=.651$	$U=271.00$ ; $p=.002^*$
After School Club		$U=437.00$ ; $p=.655$	$U=329.50$ ; $p=.002^*$
Both			$U=235.50$ ; $p=.004^*$

#### 4.3.1.2. Frequency of Teacher Support

No significant differences between groups were identified for the frequency of overall support ( $H(3) = 4.208$ ;  $p = .240$ ), emotional support ( $H(3) = 2.349$ ;  $p = .503$ ), informational support ( $H(3) = 4.323$ ;  $p = .229$ ), instrumental support ( $H(3) = 2.474$ ;  $p = .480$ ) or appraisal support ( $H(3) = 6.612$ ;  $p = .085$ ) from class teachers. Table R2 (Appendix R) shows the median and range of scores for each aspect of teacher support.

#### 4.3.1.3. Frequency of Best Friend Support

No significant difference between groups emerged for overall frequency of support from best friends ( $H(3) = 4.258$ ;  $p = .235$ ). Similarly, no significant differences between groups were identified for the emotional ( $H(3) = 6.116$ ;  $p = .106$ ), information ( $H(3) = 2.407$ ;  $p = .492$ ), appraisal ( $H(3) = 1.852$ ;  $p = .604$ ) and instrumental ( $H(3) = 3.213$ ;  $p = .360$ ) subscales relating to

frequency of best friend support. The median and range of scores for each aspect of best friend support are presented in Table R3 (Appendix R).

#### **4.3.1.4. Frequency of Classmate Support**

Analysis showed no significant difference between groups for overall frequency of support from classmates ( $H(3) = 3.365$ ;  $p = .339$ ). Analyses also showed no significant differences between groups for frequency of emotional ( $H(3) = 3.278$ ;  $p = .351$ ), appraisal ( $H(3) = 1.438$ ;  $p = .697$ ) and instrumental ( $H(3) = 2.116$ ;  $p = .549$ ) support from classmates. The frequency of informational support subscale ( $H(3) = 8.422$ ;  $p = .038$ ) approached significance but did not meet the adjusted alpha level of 0.0125. The median and range of scores relating to each aspect of the frequency of classmate support are shown in Table R4 (Appendix R).

#### **4.3.1.5. Frequency of School Community Support**

A significant difference between groups was apparent for the frequency of instrumental support from the school community ( $H(3) = 12.523$ ;  $p = .006$ ). Differences between groups for frequency of appraisal support ( $H(3) = 8.796$ ;  $p = .032$ ) and informational support ( $H(3) = 7.473$ ;  $p = .58$ ) approached significance but did not meet the 0.0125 alpha level. No significant difference emerged between groups for the frequency of emotional support ( $H(3) = 4.343$ ;  $p = .227$ ) and overall support ( $H(3) = 7.111$ ;  $p = .068$ ) from the school community. Median and range of scores pertaining to the frequency of support from the school community are shown in Table R5 (Appendix R).

Mann Whitney U analyses conducted on the frequency of instrumental support scores (see Table 4.6) showed that the Breakfast Clubs group (*Mdn*

= 16.00) believed that they received instrumental support from the school community significantly more frequently than the None group ( $Mdn = 9.50$ ). The difference between the Breakfast Clubs group and After School Clubs group approached significance but did not meet the adjusted alpha level of 0.008.

**Table 4.6:** Results of Mann Whitney U tests conducted on frequency of instrumental support from the school community (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=342.00$ ; $p=.017$	$U=281.50$ ; $p=.105$	$U=229.00$ ; $p=.001^*$
After School Club		$U=463.50$ ; $p=.949$	$U=438.00$ ; $p=.089$
Both			$U=323.50$ ; $p=.146$

#### 4.3.1.6. Summary of Frequency of Support Results

Consideration of the frequency of support scores showed that the Breakfast Clubs group and the Both group provided consistently higher ratings than the After School Clubs group and the None group for each aspect of support from key members of their social networks. This trend is illustrated graphically in Appendix S. However, between groups analyses revealed that only a small number of differences between groups were statistically significant. The Breakfast Clubs group provided significantly higher ratings



than the None group for overall frequency of parental support, frequency of informational support and instrumental support from parents as well as frequency of instrumental support from the school community. The Both group provided higher ratings than the None group for overall frequency of parental support, frequency of instrumental support and informational support from parents. Finally, the After School Clubs group rated frequency of instrumental support from parents as greater than the None group. No further significant differences between groups were identified.

#### **4.3.1.7. Importance of Parental Support**

Analyses showed significant differences between groups for overall importance of support ( $H(3) = 12.129$ ;  $p = .007$ ) and importance of appraisal support ( $H(3) = 16.455$ ;  $p = .001$ ) from parents. No significant differences emerged between groups for the importance of emotional support ( $H(3) = 3.697$ ;  $p = .297$ ), informational support ( $H(3) = 3.919$ ;  $p = .270$ ) and instrumental support ( $H(3) = 6.696$ ;  $p = .082$ ) from parents.

Follow up Mann Whitney U tests carried out on the overall importance of parental support scores (see Table 4.7) showed that the Breakfast Clubs group ( $Mdn = 31.50$ ) placed greater importance on parental support than the None group ( $Mdn = 28.00$ ) did. Differences between the Breakfast Clubs group and the After School Clubs group and the Both and None groups approached significance but did not meet the adjusted alpha level of 0.008. No further significant differences were identified. Table R6 (Appendix R) presents the median and range of scores for each aspect of parental support with same letter indices used to indicate significant between groups differences.

**Table 4.7:** Results of Mann Whitney U tests conducted on overall importance of support from parents (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=309.00$ ; $p=.012$	$U=274.00$ ; $p=.250$	$U=242.50$ ; $p=.003^*$
After School Club		$U=320.00$ ; $p=.121$	$U=452.00$ ; $p=.242$
Both			$U=251.00$ ; $p=.039$

Further Mann Whitney U tests showed that the Breakfast Clubs group ( $Mdn = 9.00$ ) perceived appraisal support from parents to be more important than the After School Clubs group ( $Mdn = 7.00$ ) and the None group ( $Mdn = 7.00$ ) did. The difference between the Both and None group fell slightly short of the adjusted alpha level of 0.008. No further between groups differences were identified. The results of the Mann Whitney U tests conducted on the importance of appraisal support scores are shown in Table 4.8.

**Table 4.8:** Results of Mann Whitney U tests conducted on importance of appraisal support from parents ( $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=295.00$ ; $p=.002^*$	$U=286.00$ ; $p=.115$	$U=227.50$ ; $p=.000^*$
After School Club		$U=336.50$ ; $p=.121$	$U=464.00$ ; $p=.303$
Both			$U=256.00$ ; $p=.027$

#### 4.3.1.8. Importance of Teacher Support

Results of analyses conducted on the importance of support data showed significant differences between groups for overall importance of support ( $H(3) = 10.914$ ;  $p = .012$ ), importance of informational support ( $H(3) = 11.116$ ;  $p = .011$ ) and importance of appraisal support ( $H(3) = 14.273$ ;  $p = .003$ ) from class teachers. The importance of emotional support fell slightly short of the adjusted alpha level of 0.0125 ( $H(3) = 8.379$ ;  $p = .039$ ). No significant difference was apparent for the importance of instrumental support ( $H(3) = 4.046$ ;  $p = .257$ ).

Follow up Mann Whitney U tests (see Table 4.9) showed that for overall importance of support the Breakfast Clubs group ( $Mdn = 32.00$ ) perceived support from class teachers to be significantly more important than the None group ( $Mdn = 29.00$ ) did. Differences between the Breakfast Clubs group and After School Clubs group and the Both group and None group

approached significance but did not meet the adjusted alpha level of 0.008.

Table R7 (Appendix R) shows the median and range of scores for the importance of teacher support.

**Table 4.9:** Results of Mann Whitney U tests conducted on overall importance of support from class teachers ( $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=380.50$ ; $p=.036$	$U=336.00$ ; $p=.717$	$U=276.00$ ; $p=.004^*$
After School Club		$U=318.50$ ; $p=.180$	$U=433.50$ ; $p=.158$
Both			$U=232.50$ ; $p=.029$

For importance of informational support from class teachers (see Table 4.10) the Breakfast Clubs group ( $Mdn = 9.00$ ) and the Both group ( $Mdn = 8.00$ ) provided higher ratings than the None group ( $Mdn = 7.00$ ). The difference between the Breakfast Clubs group and the After School Clubs group fell slightly short of the adjusted alpha level of 0.008.

**Table 4.10:** Results of Mann Whitney U tests conducted on importance of informational support from class teachers (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=403.50$ ; $p=.038$	$U=337.50$ ; $p=.405$	$U=273.00$ ; $p=.001^*$
After School Club		$U=369.00$ ; $p=.412$	$U=424.00$ ; $p=.113$
Both			$U=267.50$ ; $p=.007^*$

Finally for importance of support from class teachers (see Table 4.11) the Breakfast Clubs group ( $Mdn = 8.00$ ) perceived appraisal support to be more important than the After School Clubs group ( $Mdn = 7.00$ ) and the None group ( $Mdn = 7.00$ ). The differences between the After School Club and Both groups and the Both and None groups approached significance but did not meet the adjusted alpha level of 0.008.

**Table 4.18:** Results of Mann Whitney U tests conducted on importance of appraisal support from class teachers (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=347.50$ ; $p=.007^*$	$U=372.00$ ; $p=.789$	$U=264.50$ ; $p=.001^*$
After School Club		$U=323.50$ ; $p=.055$	$U=524.50$ ; $p=.514$
Both			$U=251.50$ ; $p=.015$

#### 4.3.1.9. Importance of Best Friend Support

No significant differences were identified for overall importance of support from best friends ( $H(3) = 6.962$ ;  $p = .073$ ) or for importance of emotional ( $H(3) = 6.210$ ;  $p = .102$ ), appraisal ( $H(3) = 3.203$ ;  $p=.361$ ), instrumental ( $H(3) = 6.063$ ;  $p = .109$ ) or informational ( $H(3) = 3.056$ ;  $p = .383$ ) support from best friends. The median and range of scores pertaining to importance of best friend support are presented in Table R8 (Appendix R).

#### 4.3.1.10. Importance of Classmate Support

No significant differences were apparent for overall importance of classmate support ( $H(3) = 3.406$ ;  $p = .326$ ) or for the emotional ( $H(3) = 2.802$ ;  $p = .423$ ), appraisal ( $H(3) = 5.596$ ;  $p = .133$ ), informational ( $H(3) = 1.233$ ;  $p = .745$ ) or instrumental ( $H(3) = 6.796$ ;  $p = .079$ ) classmate support subscales. Table

R9 (Appendix R) shows the median and range of scores for importance of classmate support.

#### **4.3.1.11. Importance of School Community Support**

For importance of school community support a significant difference between groups was identified for instrumental support ( $H(3) = 14.473$ ;  $p = .002$ ).

Scores for overall importance of support ( $H(3) = 10.038$ ;  $p = .018$ ) and emotional support ( $H(3) = 9.178$ ;  $p = .027$ ) fell slightly short of the 0.0125 alpha level. Furthermore, no significant differences emerged for importance of informational support ( $H(3) = 7.101$ ;  $p = .069$ ) or appraisal support ( $H(3) = 4.523$ ;  $p = .210$ ).

Mann Whitney U analyses (see Table 4.19) conducted on the instrumental support data showed that the Breakfast Clubs ( $Mdn = 7.50$ ) and After School Clubs ( $Mdn = 7.00$ ) groups perceived instrumental support from the school community to be more important than the None group ( $Mdn = 6.00$ ) did. The difference between the Both group and the None group approached significance but did not meet the 0.008 alpha level. The median and range of scores for importance of school community support are presented in Table R10 (Appendix R).

**Table 4.19:** Results of Mann Whitney U tests conducted on importance of instrumental support from the school community (\* $p < .008$ ).

	After School Club	Both	None
Breakfast Club	$U=375.00$ ; $p=.104$	$U=280.00$ ; $p=.201$	$U=218.50$ ; $p=.001^*$
After School Club		$U=423.50$ ; $p=.830$	$U=338.00$ ; $p=.004^*$
Both			$U=281.00$ ; $p=.049$

#### 4.3.1.12. Summary of Importance of Support Results

Following the same pattern as the frequency of support data, scores for importance of support showed that the Breakfast Clubs group and the Both group provided higher ratings than the After School Clubs group and None group for the majority of aspects of support. This trend in the data is shown in Appendix S. However, only a small number of between groups comparisons were statistically significant. The Breakfast Clubs group rated overall support from parents and teachers, appraisal support from parents and teachers, informational support from teachers and instrumental support from the school community as more important than the None group. The Breakfast Clubs group also rated appraisal support from parents and teachers as more important than the After School Clubs group did. Furthermore, the Both group rated informational support from teachers as



more important than the None group and the After School Clubs group rated instrumental support from the school community as more important than the None group. No other comparisons between groups were significant.

#### **4.3.2. School Engagement Measure**

No significant differences emerged between groups for overall school engagement ( $H(3) = 6.750$ ;  $p = .080$ ) or for any of the school engagement subscales: cognitive engagement ( $H(3) = 6.997$ ;  $p = .072$ ), emotional engagement ( $H(3) = 1.936$ ;  $p = .586$ ) or behavioural engagement ( $H(3) = 3.348$ ;  $p = .341$ ). The median and range of scores calculated for school engagement are presented in Table R11 (Appendix R).

#### **4.3.3. Discussion**

The current study set out to determine whether breakfast club attendance made a difference to children's perceptions of social support and school engagement. The study included children who attended breakfast clubs only, children who attended after school clubs only, children who attended breakfast clubs *and* after school clubs and children who attended no clubs to assess whether any differences in social support and school engagement were attributable specifically to breakfast club attendance or whether participation in any clubs before or after school made a difference to children's perceptions of social support and school engagement.

A general trend emerged across the results of the frequency and importance of social support scales and the school engagement scales with the Breakfast Clubs group and Both group providing higher ratings than the After School Clubs group and the None group. However, only a small number of

statistical comparisons between groups were significant. Results showed that the Breakfast Clubs group and Both group provided significantly higher ratings than the None group for overall frequency of parental support, frequency of instrumental support from parents and frequency of informational support from parents. Similarly, the After School Clubs group provided higher ratings than the None group for overall frequency of parental support, frequency of instrumental support from parents and frequency of informational support from parents but only the difference in instrumental support was statistically significant; scores for overall frequency of parental support and frequency of informational support fell slightly short of significance. Moreover, in terms of frequency of support, the Breakfast Clubs group reported receiving instrumental support from the school community significantly more frequently than the None group. For importance of support the Breakfast Clubs group rated overall parental support, overall teacher support, appraisal support from parents and teachers, informational support from teachers and instrumental support from the school community as more important than the None group did. The Breakfast Clubs group also rated appraisal support from parents and teachers as more important than the After School Clubs group. Moreover, the Both group rated informational support from teachers as more important than the None group and the After School Clubs group rated instrumental support from the school community as more important than the None group.

Despite only a small number of comparisons emerging as significant, the findings from the frequency of parental support scale are particularly interesting in light of concerns raised by school staff in Study 1 (Chapter 2) of

the current thesis and previous study findings relating to the over-scheduling hypothesis. In Study 1, some school staff proposed that when children attend breakfast clubs or after school clubs they spend less time at home with their families, which could be potentially detrimental to their relationships with parents. This idea relates to the over-scheduling hypothesis, which purports that activity participation outside of the formal school day reduces the amount of quality time that children spend with their families and consequently increases the risk of young people developing adjustment problems and poor relationships with parents (Mahoney, Harris & Eccles, 2006). Contrary to such arguments the findings of the current study suggest that children who attend clubs on the school premises before and after school feel more supported by their parents than children who attend no clubs. The current findings might be explicable in relation to Mahoney and colleagues (2000; 2002) views on parental monitoring practices. Mahoney, Schweder and Stattin (2002) proposed that parent-adolescent relationships are likely to be improved through adolescent participation in structured activities. This is because structured activities allow parents to monitor their children's behaviour without actually being present, which subsequently improves trust as parents know where their children are and who they are spending time with (Mahoney & Stattin, 2000). On the other hand when adolescents are involved in less structured activities where meeting schedules are inconsistent, parental trust is reduced as parents have less knowledge about their child's activity involvement. Although Mahoney and colleagues' (2000; 2002) ideas on parental monitoring and trust referred to adolescents, these ideas might be relevant to the children in the current

sample as they were aged between 8 and 11 years and it is during this period that children begin to strive towards more independence from their parents (Eccles, 1999). It may be the case that when parents allow children to attend clubs before and after school children feel like they are being supported by their parents as they are being allowed to explore an element of independence by spending time in a structured activities on school premises outside of the formal school day.

The only other significant finding to emerge from the frequency of support scales was a significant difference between the Breakfast Clubs group and the None group for frequency of instrumental support from the school community with the Breakfast Clubs group providing higher ratings than the None group. This suggests that in the case of the current study children who attended Breakfast Clubs believed that the school community provided them with resources and time more frequently than the None group believed they were provided with such support. Speculatively, it might be that the time children spend in breakfast clubs with peers from different year groups across the school is recognised because children are generally free to play and socialise within the breakfast clubs setting, which might lead children to perceive that they receive more instrumental support from the school community than children who do not attend any clubs. However, this result and interpretation must be treated with caution because no differences were identified between the Both and None groups for instrumental support and children in the Both group also attend breakfast clubs. Further research is therefore required to offer clarification on the relationship between breakfast

club attendance and children's perceptions of instrumental support from the school community.

Consideration of the other sources of support that children reported on showed that there were no significant differences between groups for frequency of support from teachers, best friends and classmates and for most aspects of support from the school community. Although these results did not show that attendance at out of school clubs was beneficial to these relationships for children in the current sample, the findings contradict the arguments often portrayed in the media that time spent in out of school activities can be detrimental to children's wellbeing (e.g. Levs, 2013). The results obtained from the current sample showed that while attendance at clubs before and after school was not advantageous to children in terms of the frequency of support received from key members of their school social network it was not detrimental either. Similarly, club non-attendance did not make any difference to children's perceptions of the frequency of support they received from members of their school social network when compared to children who attended out of school clubs.

In terms of importance of support, the Breakfast Clubs group rated overall parental support, overall teacher support, appraisal support from parents and teachers, informational support from teachers and instrumental support from the school community as more important than the None group did. The Breakfast Clubs group also rated appraisal support from parents and teachers as more important than the After School Clubs group. Moreover, the Both group rated informational support from teachers as more important than the None group and the After School Clubs group rated instrumental

support as more important than the None group. Although importance of support ratings from the Child and Adolescent Social Support Scale are intended for clinical interpretation, Malecki and Demaray (2003) implied that such ratings can help in the creation of environments that are productive to ensuring children receive the types of support they need. This idea compliments the Person-Environment Fit theory (Eccles et al., 1993), which argues that for children to benefit from participation in an activity, the environment must be conducive to the needs of the children involved. The present findings suggest that there may be differences in the importance that children place on different types of support according to their involvement in different out of school clubs. Breakfast and after school clubs could offer opportunities for children to gain support from various members of their social network by involving these different members in out of school activities through invitations to special events (i.e. themed days, awards ceremonies) or by offering volunteering opportunities (i.e. support roles). However, it should be noted that the current study was carried out on a small scale involving only five schools thus further examination of the importance of support construct would be needed on a much larger scale to fully determine whether school clubs should incorporate explicit opportunities for children to encounter different types of support from different members of their social network and to look at viable ways of incorporating this support.

Although previous research has identified positive relationships between school engagement and out of school club attendance (Dotterer et al, 2007), the results from the current study do not support previous findings as no significant differences were identified between groups for any aspect of

school engagement. These findings suggest that within the current sample out of school club attendance made no difference to children's perceptions of school engagement.

Whilst the findings from the current study offer a useful insight into social support and school engagement in relation to breakfast club attendance, there are a number of methodological considerations that should be taken into account by future researchers in this area. Firstly, as in Study 2 of the current thesis, limited information was available from schools on the clubs that children attended and duration of their participation in these clubs.

Mahoney, Parente and Zigler (2010) argued that while children's presence at a club is widely used within the research literature as an indicator of their participation, the intensity and duration of attendance might also be important. In reviewing previous studies which have investigated children's out of school club participation, Mahoney et al suggested that children might have to attend a club consistently for at least one or two sessions per week for a year or longer before benefits of participation can be recognised.

Children involved in the current study completed measures approximately six to eight weeks after the start of the new school year and all children reported attending at least one out of school club session per week but no information was available on whether children's attendance at out of school clubs was consistent across time. Furthermore, in the context of the UK education system, children's attendance at school is broken down into half terms. Each half term is around four to eight weeks long and at the end of each half term children are given a one to two week break from school. Also at the end of each school year children take a summer break of around six weeks away

from school. At present, no studies have considered the impact of school holidays on the gains that children make from attendance at out of school clubs. If the arguments put forward by Mahoney et al are correct and children do need to attend a club consistently for a year before benefits can be seen, further research of a longitudinal nature is necessary to determine whether the breaks that children have away from school across the school year have any impact on the gains that they make from out of school club attendance.

Moreover, in relation to the frequency of children's attendance at out of school clubs, children's reports suggested that they do not attend structured activities on the school site every day during the school week and they are therefore involved in other activities away from school premises. However, no consideration was given in the current study to what children do outside of school time when they are not engaged in structured activities on the school premises. Mahoney and Parente (2009) proposed that research comparing patterns of care for children outside of the school day is necessary as children can engage in a number of different care arrangements in addition to structured activity participation across the school week (e.g. self care, family care). Furthermore, Vandell and Shumow (1999) suggested that the care arrangements that children are engaged in outside of the school day can have a significant impact on their wellbeing. For example, time spent alone by children in the third grade was associated with a greater incidence of behaviour problems in the third and fifth grade. Therefore if the current study was to be replicated it would be advantageous to consider children's care arrangements on days that they are not involved in structured out of



school clubs to allow closer examination of how different patterns of care arrangements before and after school might be associated with children's perceptions of social support and school engagement.

Finally, in relation to methodological considerations, self report is recognised as an optimal method for collecting data on children's perceptions of social support (Malecki & Demaray, 2003) and school engagement (Wang & Eccles, 2012). However, in the case of the current study when children independently completed all of the measures being investigated many children missed out questionnaire items resulting in incomplete subscales. Future research in this area should look at ways to administer questionnaires that prevent children from accidentally omitting items. For example, questionnaires could be presented on computers so that children can not progress through the questions when an answer has been missed thus increasing the number of completed scales in comparison to when standard paper and pencil methods are used.

In conclusion, the results of the current investigation offer a unique contribution to the research literature as this is the first quantitative study to identify a positive association between children's attendance at breakfast and after school clubs and perceived support from parents. These findings might potentially offer some reassurance to those parents who have no other option but to leave their children in breakfast clubs and after school clubs so that they can go out to work and they go against the concerns raised by some school staff in Study 1 of the current thesis that out of school club participation might be detrimental to parent-child relationships. Furthermore, the current study shows that children can attend an average of six structured

activity sessions per week without detriment to the support they receive from different members of their social network. Further investigation is warranted in relation to the over-scheduling hypothesis to consider whether there is an activity frequency threshold for children who attend before and after school clubs.

## **CHAPTER 5: The relationship between school breakfast provision, children's breakfast intake and attitudes towards breakfast**

### **5.1. Introduction**

As discussed in Chapter 1 of the current thesis, breakfast is widely recognised as the most important meal of the day. This consensus has been reached due to the numerous benefits associated with breakfast consumption. For example, Szajewska and Ruszczynski (2010) reviewed sixteen studies that investigated the effects of breakfast consumption on body weight or body mass index of children and young people aged 7 - 21 years. Findings showed that only three of the studies included in the review provided a definition of breakfast and there were variations across studies with regards to breakfast skipping criteria and definitions of overweight and obese. Despite these limitations, the authors concluded that breakfast skipping was associated with increased body mass index and eating breakfast was a protective factor against becoming overweight or obese.

Moreover, Matthys, Henauw, Bellemans, De Maeyer and Backer (2007) reported an association between the consumption of a good quality breakfast and the nutrient intake of adolescents. Three-hundred-and-forty-one adolescents aged between 13 and 18 years were recruited from academic and vocational streams of five Belgian secondary schools. Adolescents completed a seven-day food diary through which they reported on the types and amounts of foods they consumed for breakfast, lunch, dinner and snacks. For the purpose of the investigation, breakfast was defined as “the first eating occasion involving a solid food or a beverage that occurred after

waking” (p. 414) and adolescent were dichotomised as low or high quality breakfast consumers. Adolescents categorised as low quality breakfast consumers reported never having breakfast or regularly having breakfast of low nutritional value i.e. a drink only or one cereal, fruit/vegetable or dairy item possibly in combination with a non-dairy or protein product. Alternatively, those adolescents who were categorised as high quality breakfast consumers regularly ate breakfast of good or excellent nutritional value consisting of two or three cereal, dairy or fruit/vegetable items potentially combined with a protein or non-dairy product. Results showed that around 31% of boys and 44% of girls were considered to be low quality breakfast consumers. Those who consumed a good quality breakfast had more bread, fruit, milk, milk products and fruit juice and consumed fewer soft drinks than low quality breakfast consumers. Additionally girls who were classified as good quality breakfast eaters consumed more cereal products, cheese and water than low quality breakfast eaters. For both boys and girls, consumption of a good quality breakfast was associated with greater intakes of energy, proteins and micronutrients. Moreover, overweight girls and girls involved in vocational training were more likely to be categorised as low quality breakfast consumers. Matthys et al concluded that adolescents who consume a good quality breakfast have overall food and nutrient profiles that are superior to those who are considered to be low quality breakfast consumers. However, the authors argued that breakfast intake studies are methodologically challenging as there are no scientifically defined criteria of what constitutes a breakfast and there are multiple methods available for collecting breakfast data. Despite such limitations, Matthys et al

demonstrated that consumption of a good quality breakfast can contribute positively to adolescent nutrient profiles.

Due to the advantages afforded to children and adolescents who regularly consume a nutritious breakfast, efforts have been made to identify the correlates associated with breakfast consumption and breakfast skipping.

Dejong et al. (2009) used baseline data from the ENDORSE study: Research into Environmental Determinants of Obesity Related Behaviors in Rotterdam School Children (van der Horst et al, 2008) to report on the environmental and cognitive correlates associated with breakfast consumption in a sample of 1089 adolescents aged 12 - 15 years (mean age = 14 years) from 14 schools. Adolescents answered two questions which aimed to measure their breakfast consumption habits during the school week (i.e. "On how many school days do you usually eat breakfast?") and on weekends (i.e. "On how many weekend days do you usually eat breakfast?"). Responses were summed to give a total weekly breakfast consumption score and scores were then dichotomised into categories of 'Everyday' and 'Not Everyday'.

Cognitive correlates of breakfast consumption were measured through items based on constructs from the Theory of Planned Behaviour (TPB; Ajzen, 1985), which asserts that an individual's behaviour is determined by their behavioural intentions. These behavioural intentions are driven by three factors: 1) an individual's attitude towards the behaviour; 2) subjective norms, which refer to an individual's perceptions of how significant others such as family members and peers feel about the behaviour being performed; 3) perceived behavioural control, which considers the ease with which a person feels they are able to conduct the behaviour. In the Dejong

et al study, adolescents were presented with a series of sentences, which they were required to rate on a five point Likert scale ranging from +2 to -2. Adolescents' indicated their attitude to breakfast by rating two sentences that asked them about how good or bad and how pleasant or unpleasant they believed breakfast to be. The subjective norm measure was concerned with adolescent perceptions of how good or bad their parents thought it was if they ate breakfast. Perceived modelling by parents and perceived modelling by friends looked at how often adolescents thought these individuals ate breakfast. The perceived behavioural control measure asked adolescents whether it was their decision to eat breakfast and how easy it was for them to eat breakfast if they wanted to. Finally, in terms of TPB, the intention measure asked adolescents to rate the likelihood that they intended to eat breakfast in the next six months. Environmental factors were measured according to physical availability (i.e. "Are there mostly sufficient breakfast products available at home to eat?"); the political environment, which looked at whether there were rules at home about breakfast consumption practices (e.g. "Are there rules about eating breakfast together at the table?"); and the socio-cultural environment, which was concerned with how often adolescents ate their breakfast and evening meal with a parent and how often they ate their evening meal in front of the television. Results showed that adolescents with more positive attitudes towards breakfast, those who rated stronger modelling from parents and friends and those who expressed stronger intentions to eat breakfast were more likely to eat breakfast daily. Moreover, adolescents who decided to eat breakfast for themselves were less likely to consume breakfast daily compared to those who did not decide

for themselves. In terms of the environmental correlates of breakfast consumption, adolescents were more likely to consume breakfast on a daily basis when sufficient breakfast products were available, breakfast was eaten with a parents frequently or always, an evening meal was always eaten with a parent and two rules about breakfast were enforced at home. The most frequently cited breakfast rules that existed in the home were a rule about whether breakfast should be eaten and a rule about what should be eaten for breakfast. Eating an evening meal in front of the television sometimes, frequently or always was associated with reduced odds of daily breakfast consumption compared to those who ate an evening meal in front of the television rarely. Dejong et al concluded that attitudes, intentions, modelling and perceived behavioural control play a significant role in adolescent breakfast consumption habits. In addition, they emphasised the importance of parental influence and a home environment that is supportive of breakfast consumption.

The importance of attitude towards breakfast has also been shown in a sample of younger children aged 9 - 11 years. Tapper et al (2008) collected data on the breakfast attitudes and dietary habits of 2382 children.

Children's breakfast attitudes were measured using the Breakfast Attitude Scale, which is a 13-item questionnaire developed by Tapper et al that measures affective (e.g. "Eating breakfast is boring"), evaluative (e.g. "It's ok to miss breakfast") and behavioural dispositions (e.g. "I usually eat a good breakfast") relating to breakfast. The Breakfast Attitude Scale was reported to show "good construct validity, high internal reliability and acceptable test-retest reliability" (p. 6) as well as good external validity. The dietary habits of

the entire sample were measured using a questionnaire developed by the authors, which was based on the Day in the Life Questionnaire (Edmunds & Ziebland, 2002). The questionnaire required children to recall everything they had to eat and drink at given time points during the previous day and on the morning of reporting before the start of school. A subsample of 378 children also took part in a standardised dietary recall interview (Lytle et al, 1993) and 366 parents of children involved in the study completed a 10-item questionnaire on their children's breakfast eating habits. Parents reported on how frequently their children engaged in various breakfast eating behaviours such as eating breakfast at home and taking money to buy breakfast on the way to school. Parents also rated how frequently they believed their child consumed a healthy breakfast. Children's dietary data collected via questionnaires were coded into seven categories: fruit, bread, cereal, milk and milk products, sweet items (e.g. cakes, biscuits, chocolate), crisps and other foods. Further, sweet items and crisps were grouped to form the unhealthy breakfast item category and fruit, bread, cereal and milk made up the healthy breakfast item category. When the dietary data were analysed in relation to the breakfast attitude scores, those children who skipped breakfast on two occasions reported a poorer attitude to breakfast than those who skipped breakfast on only one day while those who did not skip breakfast on either day showed a more positive attitude to breakfast than those who skipped breakfast on one day. Moreover children's breakfast attitudes were significantly positively correlated with the number of breakfast items consumed overall and the number of healthy breakfast items consumed. A significant negative correlation was identified between



children's attitude to breakfast and the number of unhealthy breakfast items consumed. A similar pattern of results emerged for the data collected on children's dietary habits determined from the dietary recall interviews and their breakfast attitudes. Children who skipped breakfast reported a more negative attitude to breakfast than those who did not skip breakfast. The same pattern of results as that identified for the dietary questionnaire data was shown for healthy and unhealthy items in relation to children's breakfast attitudes. However, no significant correlation emerged between breakfast attitude and the overall number of items consumed for breakfast. Further correlations conducted on children's breakfast attitudes and data collected from parents showed that children whose parents reported that they ate breakfast on seven days during the week had better breakfast attitudes than those who consumed breakfast on fewer than seven days. Parents' ratings of how often their children ate a healthy breakfast also correlated positively with children's breakfast attitudes. Overall, following the same conclusions drawn by Dejong et al (2009), Tapper et al showed a significant relationship between children's attitudes towards breakfast and their breakfast consumption habits.

In a more recent study, Moore and Murphy (2009) reported on the attitudes and perceptions of a sample of Welsh children in school years 5 and 6 (aged 9 - 11 years). Data collected from 1672 children from 52 schools across nine local authorities in Wales were analysed to determine whether children's attitudes, self-efficacy and influences of parents, teachers and peers were associated with breakfast skipping. Breakfast skipping was assessed through completion of a single item which asked children to rate their level of

agreement with the sentence “Most days, I don’t eat breakfast” on a 5-point Likert scale ranging from ‘Disagree a lot’ to ‘Agree a lot’. A higher score represented more frequent breakfast skipping. Children’s attitudes towards breakfast were measured using the Breakfast Attitude Scale (Tapper et al, 2008); however, Moore and Murphy removed items pertaining to behavioural dispositions in order to counteract any potential impact on the breakfast skipping measure thus a seven-item version of the Breakfast Attitude Scale was used. Five items were used to measure children’s perceptions of social norms in relation to breakfast skipping. Two items asked children to rate how often their parents and peers consumed breakfast (descriptive norms) and three items asked children how strongly they agreed that their parents, peers and teachers thought they should eat breakfast (injunctive norms). All responses were made on a 5-point Likert scale ranging from ‘Agree a lot’ to ‘Disagree a lot’. For self-efficacy, the authors specified that “A single item was used to measure self-efficacy for eating breakfast. Variations of the item ‘If I want to, I can easily eat breakfast’ have been used previously in two studies of children’s breakfast eating behaviours” (p. 334) but no additional details about the self-efficacy measurement are provided i.e. it is not clear from the information given whether the authors used the same measure of self-efficacy as the methods used in the cited papers. Results showed that of all the correlates under investigation, the strongest association existed between breakfast skipping and children’s attitudes. For self-efficacy, as children reported increasing ease to eat breakfast, their likelihood of skipping breakfast decreased. Finally, for social norms, significant inverse correlations between parent and peer breakfast consumption and breakfast

skipping were identified. As children's perceptions that their parents and peers consumed breakfast increased, their likelihood of skipping breakfast decreased. Further consideration of these data showed that the association between parental descriptive norms and breakfast skipping was much greater than the same association between peer descriptive norms and breakfast skipping. In terms of injunctive norms, children reported less frequent breakfast skipping when they believed more strongly that their parents and teachers thought they should eat breakfast and this relationship was marginally stronger for parents than teachers. The relationship between injunctive norms and breakfast skipping was not significant for peers. Based on their findings, Moore and Murphy concluded that interventions to improve children's dietary habits should consider the influence of children's attitudes, environmental factors such as the availability of breakfast as well as "micro-social factors" (p. 337) such as parental influences.

The results of the studies by Dejong et al (2009), Tapper et al (2008) and Moore et al (2009) emphasise the important role of children's attitudes in their breakfast consumption habits. Furthermore, Dejong et al and Moore et al highlight the key role of parents in influencing the breakfast habits of children and adolescents. However, reports have suggested that an increase in maternal employment has led to a reduction in the number of meals that families consume together at home (e.g. Crepinsek & Burstein, 2004; Moser et al., 2011). Moreover, when meals are skipped, breakfast is the most probable meal to be omitted (Rampersaud et al, 2005; Fertig, Glomm & Tchernis, 2009).

With fewer breakfast meals eaten at home, an increase in the number of children who consume food on the way to school has raised concerns. In a 2009 study commissioned by Kellogg's, the research company Opinions Matter interviewed 1000 7-14-year-olds and their parents about breakfast habits. Results of the survey showed that 16% of 7 - 12 years olds and 25% of 13 - 14 years olds reported receiving money from parents specifically to buy breakfast on their way to school. Sweet foods such as biscuits, cakes and fizzy drinks and foods high in fat and salt such as pastries and meat based snacks were consumed for breakfast by 24% of the 7-14-year-olds surveyed. When parents were asked about breakfast habits within their home, 5% said that their children rarely have breakfast at home and are allowed instead to buy something on the way to school. It is noteworthy that the percentage of parents reporting that they gave their children money to buy breakfast was considerably lower than the percentage of children who reported receiving money from parents for breakfast suggesting that demand characteristics might have influenced survey responses. Sixteen percent of parents suggested that time pressures in the morning often made it difficult for their families to have breakfast together before children left for school. Moreover, an association between parental work patterns and children's breakfast habits was identified as 28% of parents who worked full time, 10% of parents who worked part-time and 8% of stay at home parents reported giving their children money to buy breakfast on the way to school. The report was concluded with some recommendations on how parents can ensure their children develop healthy breakfast habits. The recommendations included establishing regular breakfast routines from an early age, looking for

alternative breakfast options when time is limited and enrolling children in breakfast clubs.

As mentioned at various points throughout the current thesis, breakfast clubs have been introduced as a means of reducing the number of children who skip breakfast and to improve the nutritional quality of the breakfast foods that children consume. However, it is currently unclear whether breakfast clubs provide children with a breakfast meal that is nutritionally superior to a breakfast consumed elsewhere as mixed research findings have been reported.

In a study by Simpson, Wattis, Crow and Summerbell (2003) dietary intake data were collected from 145 children and adolescents from school years two (aged 6 - 7 years) and five (aged 9 - 10 years) of a primary school and years eight (aged 12 - 13 years) and 10 (aged 14 - 15 years) of a special school in Middlesbrough, UK. Dietary intake was determined using a one-day dietary recall along with food photographs to represent portion sizes. Data were analysed to compare children's nutrient intakes for Vitamin C, Vitamin D, Protein, Calcium, Iron and Zinc to Reference Nutrient Intakes (RNI's) on the day that data were collected. RNI's are values that describe the level of nutrients required by individuals based on their age and sex. Analysis was also conducted to determine whether children's nutrient intake differed according to whether they attended breakfast club on the day of reporting. Results showed that a higher percentage of children who attended breakfast club reported nutrient intakes that were above the recommended RNI's for each nutrient considered on the day of reporting. Furthermore, when the data from the breakfast club attendee group were examined to

include children's free school meal entitlement, analysis revealed that a greater number of children who were eligible for free school meals had nutrient intakes that were above the recommended levels for Zinc, Protein, Vitamin D and Vitamin C than children who attended breakfast club but were not entitled to free school meals. The results suggest that breakfast club attendance appears to have a positive impact on children's nutrient intake and attendance may be particularly beneficial for those children who are "in greatest need- i.e. pupils from lower socio-economic background as indicated by their eligibility for free school meals" (p. 2).

Contrary to the findings of Simpson et al (2003), Belderson et al (2003) found breakfast club attendance to be potentially detrimental to children's nutrient intake. One-hundred-and-eleven children and adolescents aged 9 - 15 years were recruited from three schools to complete weighed food diaries on three school days. Two schools were secondary schools based in the South of England and the remaining school was a primary school in the North of England; all had a breakfast club available for pupils to attend on the school site. Children and adolescents were classified as breakfast club attendees if they attended breakfast club "for at least 3 [days] per week and for most weeks in the school term" (p. 1004). Controls were recruited from the same classes as breakfast club attendees and were matched according to their free school meal entitlement to control for socioeconomic status between groups. When the nutrient intakes of breakfast club attendees were compared to non-attendees, those who attended breakfast clubs reported significantly higher intakes of fat, saturated fat and salt and lower intakes of carbohydrate than those who did not attend breakfast clubs. The authors

suggested that the poorer nutritional intake of breakfast club attendees might have resulted from some unhealthy foods being served within breakfast clubs such as fried sausage sandwiches and tea. Moreover, Belderson et al proposed the possibility that breakfast club attendees might have poorer dietary habits throughout the day than breakfast club non-attendees. They speculated that children from lower socioeconomic backgrounds where “food choice may be restricted and dietary patterns are sub-optimal” (p. 1006) might be more likely to attend breakfast clubs.

Overall, previous research suggests that the foods consumed by children and adolescents at breakfast time can significantly affect their nutrient intake. Moreover, it appears from the evidence outlined that children’s and adolescents’ attitudes, their attendance at breakfast clubs and their socioeconomic status can make significant contributions to the quality of the breakfast they consume. Given that the number of breakfast clubs available within low income areas of the UK is set to increase through actions outlined in the School Food Plan (Dimbleby & Vincent, 2013) it is important that, in addition to breakfast club attendance, potential associations between children’s breakfast intake, their attitudes towards breakfast and socioeconomic status (SES) are considered.

Through investigation of a new pilot breakfast scheme implemented in the North West of England, the present study aimed to determine whether differences existed between children from schools in areas of differing SES, in terms of the number of healthy and unhealthy breakfast items consumed on the day of reporting. Based on previous research findings, it is hypothesised that children attending the higher SES school will consume a

greater number of healthy breakfast items and fewer unhealthy breakfast items than children attending the lower SES school. Children's attitudes to breakfast will also be measured to establish whether a relationship exists between children's attitudes to breakfast and the breakfast foods they consume. Based on previous research findings (Tapper et al., 2008) it is expected that children's attitudes to breakfast will correlate positively with the number of healthy breakfast items consumed and negatively with the number of unhealthy breakfast items consumed.

## **5.2. Method**

### **5.2.1. Participants**

Ninety- eight children aged between 9 and 11 years were recruited from school years 5 and 6 of two primary schools in the North-West of England. As an opt-out method of consent was used, which required parents to only return a form if they did not want their child to participate in the study it was not possible to obtain children's dates of birth so exact ages could not be calculated. However, each child recorded their age in years when they completed their questionnaires so it was possible to establish that 18 children were aged 9 years, 56 children were aged 10 years and 24 children were aged 11 years. Information on each participating school is presented in Table 5.1.



**Table 5.1:** Characteristics of schools participating in Study 4.

Schools	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1	467	Community	13.9%	4.5%	48.7%	55%	90%
2	260	Voluntary Aided	7.3%	10.9%	25.5%	24%	95%

<sup>a</sup>Information taken from [www.education.gov.uk](http://www.education.gov.uk)

<sup>b</sup>Information taken from [www.neighbourhood.statistics.gov.uk](http://www.neighbourhood.statistics.gov.uk)

<sup>c</sup>Jobseekers allowance; Incapacity benefit or Severe Disablement Allowance; Disability Living Allowance; Income Support

Both schools offered breakfast to all children free of charge on the school site during the school week. In School 1 breakfast was served to children within their normal classroom at the very start of the school day before class work commenced. In School 2, children were served breakfast in the school hall for the 20 minutes immediately prior to the start of the formal school day. All children were offered a three-item breakfast consisting of fruit juice or water; a bread or cereal item such as a bagel or a cereal bar; and a fruit item, which was either dried fruit, chopped fruit or a piece of whole fresh fruit. Children were allocated three items each day and were free to consume as much or as little of the breakfast as they chose. School breakfast had been in place in both schools for approximately 8 weeks prior to data collection.

### **5.2.2. Measures**

A Breakfast Attitude Questionnaire (Tapper et al., 2008) and a morning routine diary were set up on the Survey Gizmo website ([www.surveygizmo.com](http://www.surveygizmo.com)) for children to access and complete online.

Children were provided with a worksheet to guide their completion of the online questionnaires. Each child's worksheet contained an individual participant number and instructions on how to access the online questionnaires. The worksheet was designed to be appealing and easy for children to follow so that the questionnaires could be completed with minimal adult support (see Appendix T).

#### **5.2.2.1. Breakfast Attitude Questionnaire (Tapper et al, 2008)**

The Breakfast Attitude Questionnaire is a 13-item scale designed to measure children's behaviours, beliefs and feelings about breakfast. The questionnaire presents children with a series of simple sentences such as

“It’s okay to miss breakfast” and they are required to choose a response from a five point scale ranging from ‘Agree a Lot’ to ‘Disagree a Lot’ to show their level of agreement with each sentence. For the purpose of the current study, the Breakfast Attitude Questionnaire was set up online so that each question was presented individually with the available responses listed underneath each question. A complete set of instructions, questions and possible responses for the Breakfast Attitude Questionnaire are presented in Appendix U.

Attitude to breakfast is represented by the mean score yielded from the 13 questionnaire items resulting in a minimum possible attitude score of one and a maximum possible score of five. A higher mean score represents a more positive attitude towards breakfast. Prior research shows that the Breakfast Attitude Questionnaire has good external and construct validity, acceptable test-retest reliability and high internal consistency (Tapper et al, 2008).

#### **5.2.2.2. Morning Routine Diary**

The morning routine diary presented children with a series of questions about different behaviours they might have engaged in prior to the start of the school day in order to aide their recall of foods and drinks they consumed between waking up at home and the start of the formal school day. For example, children were asked whether they stopped at a shop on their way to school; if they answered yes they were presented with a question that asked them whether they bought anything and whether they ate or drank anything that they bought from the shop. If children answered no to stopping at a shop they moved directly to the next question about what they did when

they arrived at school. All instructions, questions and response options for the morning routine diary are presented in Appendix V.

The morning routine diary was based on the Day in the Life Questionnaire (Edmunds & Ziebland, 2002) which has been used in previous research to investigate children's intake of fruit and vegetables across the school morning (e.g. Robertson et al., 2008; Jones et al., 2012). Moore and colleagues (2007) have shown that the Day in the Life Questionnaire can be successfully adapted to investigate children's breakfast food intake and results are comparable with the standardised 24-hour recall procedure.

### **5.2.3. Procedure**

Ethical approval was obtained from the Faculty of Healthy and Life Sciences Ethics Committee at Northumbria University before project information was distributed to school head teachers. After receiving information about the current research project two head teachers acted in loco-parentis to allow all children in school years 5 and 6 of their schools to participate in the study unless children chose not to take part or were opted out by their parents. Children were then provided with an information sheet that gave child-friendly information about the research tasks and they were also given a consent form to take home to inform their parent or carer about the online tasks. Parents and carers were asked to return the detachable section of the form to their child's teacher by a given date if they did not want their child to participate. The researcher was not informed of any children being withdrawn from the research by their parent or carer.

Following the deadline for the return of opt out parental consent forms, children were provided with a worksheet and were allocated time during the school day to complete the online questionnaires. Children were asked to complete the Breakfast Attitude Questionnaire on one occasion and the morning routine diary on five school days. All questionnaires were completed by children within a two-week period and temporal data collected by the Survey Gizmo website showed that all questionnaires were completed during the formal school day between 9:00am and 3:30pm.

Once data collection was complete children were provided with a debrief sheet, which explained the purpose of their participation and informed them that they could ask their parent or carer to contact the researcher if they wanted to ask a question about anything they had done. Children were also given a debrief form to take home to inform their parent or carer that the research had been completed and to provide them with the researcher's contact details to use should they have any queries about the research. As a token of appreciation for their efforts, all children were given a certificate to acknowledge their participation in the study.

#### **5.2.4. Data Coding**

The Breakfast Attitude Scale was scored according to the recommended scoring criteria outlined by the Tapper et al (2008). Each item was scored on a five point scale ranging from 'Agree a Lot' which was given a score of one to 'Disagree a Lot' which was given a score of five. Items 1, 12 and 13 were reverse scored so that all item scores were comparable then a mean breakfast attitude score was calculated for each child by dividing the sum of all the scale item responses by 13.

For the Morning Routine Diary all food and drink items that children reported consuming at home, on the way to school and at school breakfast were recorded and grouped into healthy and unhealthy categories using a similar protocol to that adopted by Tapper et al (2008). Based on Tapper et al, the healthy breakfast category collated for the purpose of the current study consisted of bread, cereals, dairy products and fruit. Bread was included in the healthy category due to the nutritional benefits associated with its consumption. Bread is thought to provide more than 10% of our daily intake of protein and iron and more than 20% of fibre, calcium and magnesium (British Nutrition Foundation, 2012). Some of the features of cereals and cereal bars resulted in them being deemed appropriate for inclusion in the healthy category. For example, some cereal products (e.g. Shreddies) have a low glycaemic index which means they release energy steadily and are likely to make children feel fuller for longer. Additionally, many cereals products are fortified with vitamins and iron, which are particularly beneficial for children as they grow. Furthermore, the cereal bars provided in the breakfast clubs under investigation were low fat, low sugar cereal bars thus providing a healthy option. The nutritional value of some cereal products has come under scrutiny in recent years due to the high levels of sugar they contain (NHS Choices, 2012). However, cereal products were considered appropriate to be categorised as healthy as the consumption of cereal has been associated with superior nutrient intake (Gibson & O'Sullivan, 1995). Dairy products such as milk and yogurt are healthy breakfast options as they provide children with a good source of calcium, magnesium and potassium, which are needed for growth and the development of healthy teeth and

bones but are often lacking in children's diets (Dairy Council, 2009). Finally, fruits were included in the healthy breakfast category as current Government guidelines in the UK (Department of Health, 2010) stipulate that children and adults should aim to consume a minimum of five pieces of fruit and vegetables per day as part of a healthy diet.

The unhealthy breakfast category used in the present study was expanded further than the unhealthy category in Tapper et al (2008) to include fizzy drinks, hot caffeinated drinks and fast foods in addition to sweets and biscuits as these items were reported by several children in the current study. Fizzy drinks were categorised as unhealthy as they have no nutritional benefits (Minnesota Dental Association, 2003) and are high in sugar, which can have detrimental impact on children's oral health and weight management (Ludwig, Peterson & Gortmaker, 2001; Tahmassebi et al., 2006). Hot caffeinated drinks were deemed inappropriate for breakfast as even low doses of caffeine have been shown to increase anxiety, mood swings, restlessness and hyperactivity in children (Warzak et al., 2012). Moreover, tannins, which are a chemical found in tea, are thought to reduce the body's ability to absorb iron (Zijp, Korver & Tijburg, 2000), which is problematic given that children are at greater risk of iron deficiency as their bodies utilise high levels of iron for growth (Temme & Hoydonck, 2002). Fast foods were categorised as unhealthy breakfast options as they possess features associated with excess weight gain including high energy density, large portion sizes, high saturated fat content, high glycaemic load and low fibre content (Bowman et al., 2004). Finally, sweets and biscuits were categorised as unhealthy breakfast options as they often contain high levels

of sugar, which can cause tooth decay (NHS Choices, 2012). Also, biscuits can contain high levels of saturated fat (British Heart Foundation, 2011), which has been linked to high cholesterol and coronary heart disease (Flahive, 2014). Crisps were included in the unhealthy category of the Tapper et al study but were not relevant to the current study as they were not reported by any children; crisps were therefore not included in the unhealthy category of the present study. Examples of some of the foods reported by children in each breakfast category are provided in Table 5.2.

**Table 5.2:** Examples of foods included in the subcategories of the healthy and unhealthy breakfast categories.

Breakfast Categories and Subcategories		Example Foods and Drinks Reported by Children
Healthy Breakfast Items	Bread	Bagel; Toast
	Cereals	Cornflakes; Cereal Bar
	Dairy Products	Milk; Yogurt
	Fruit	Apple; Grapes
Unhealthy Breakfast Items	Sweets and Biscuits	Galaxy Chocolate; Biscuits
	Fizzy Drinks	Lucozade; Dr Pepper
	Tea/Coffee	Cup of Tea; Cappuccino
	Fast Food	KFC Chicken Wrap; Pizza

For each child overall healthy and unhealthy breakfast scores were calculated. For children who attended school breakfast the overall healthy



breakfast score was the sum of the number of healthy breakfast items consumed at home and the number of healthy breakfast items consumed at school breakfast. For children who did not attend school breakfast the overall school healthy score was made up of the number of healthy breakfast items consumed at home only. As no unhealthy items were consumed at school breakfast the overall unhealthy breakfast score for school breakfast attendees and non-attendees consisted of unhealthy breakfast items consumed at home only. In calculating the healthy and unhealthy breakfast scores foods consumed on the way to school were disregarded as it was unclear in cases where children reported consuming the same foods and drinks at home and on the way to school whether the foods that children brought from home had been started as breakfast at home and were finished off on the way into school or whether children had two different lots of the same foods.

As the data were collected online it was possible to determine the date and time that children completed the questionnaires so this information was noted alongside the information children provided on the foods and drinks they consumed for breakfast. The date and time information showed that while there was some variation between days and between schools in the times that children completed the questionnaires, all children completed them at some point during class time either between 9:00am and 12:00pm or between 1:00pm and 3:30pm. These times fall within the parameters identified by Moore et al. (2007) who showed that children are highly accurate at recalling breakfast items consumed on the day of reporting.

### **5.2.5. Data Analysis**

It was initially envisaged that it would be possible to consider children's breakfast habits across a five day period; however, only eight children from the entire sample completed the morning routine diary on five school days. Twelve children completed the diary on four school days, 14 children completed the diary on three school days, 58 children on two school days and none children completed the diary on one school day only. To ensure consistency the first day of reporting was nominated as the target day for analysis. Further consideration of the morning routine diary data resulted in 16 children being withdrawn from the sample prior to analysis as they had provided ambiguous responses such as 'breakfast' and 'food and drink' for questions requiring them to specify the foods and drinks they consumed at a particular time point.

Given the significant findings obtained from Shapiro-Wilk tests suggesting that the data were non-normally distributed, non-parametric tests were used to analyse all data collected for the current study.

Data were collated for each school to determine children's breakfast consumption habits on the day of reporting (i.e. where did children choose to have breakfast and what did they have?) For the purpose of the current investigation, breakfast was defined as anything children had to eat or drink between waking up and beginning the formal school day on the day of reporting. Comparisons were made between breakfast club attendees from each school in terms of the number of healthy and unhealthy breakfast items they consumed. The same analyses were also carried out between breakfast club non-attendees from each school.

## **5.3 Results**

### **5.3.1. Description of Children's Breakfast Habits on the Day of Reporting**

#### **5.3.1.1. School 1**

Data from 50 children from School 1 were analysed. Overall, 38 children from School 1 reported that they consumed food and drink for breakfast, seven children had food only, four children had a drink only and one child had nothing at all to eat or drink for breakfast before the start of the formal school day.

When these data were broken down to determine where children had breakfast (i.e. at home, on the way to school or at school breakfast) it became apparent that twenty-four children sampled from School 1 had food and drink for breakfast at home before they set off for school, however seven of these children had at least one breakfast item at home that could be considered unhealthy (i.e. sweets, fizzy drink, fast food, tea or coffee). Fourteen of the children who had food and drink at home also reported that they attended school breakfast. Six of these children had food and drink at school breakfast, seven children had a drink only and one child reported having nothing to eat or drink at school breakfast. Ten children who had food and drink at home reported that they did not attend school breakfast. Five children who had food and drink at home consumed food on the way to school that they brought from home and one of these children also consumed food bought from a shop on their way to school. Two children who consumed food and drink at home brought a drink from home to have

on the way to school and one of these children also bought a drink from a shop to consume on their way to school. Three of the seven children who had food or drink on the way to school consumed an item that could be considered unhealthy.

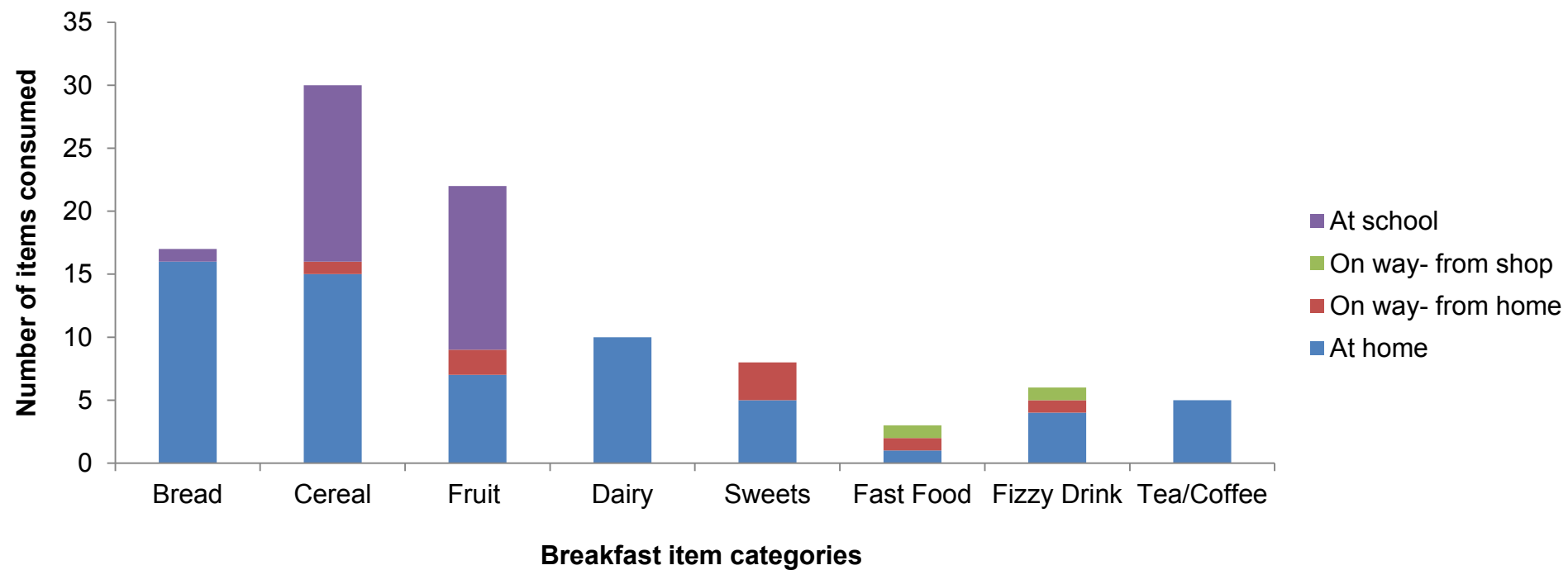
Six children from School 1 consumed a drink only at home for breakfast before they left for school; one of these children consumed a drink that could be considered unhealthy. Four children who had a drink only for breakfast at home went on to have food and drink for breakfast at school; one child had food only at school breakfast and one child did not attend school breakfast. One child who had a drink at home brought unhealthy food from home to consume on the way to school and another child bought a drink from a shop on the way in to school.

Twelve children from School 1 had breakfast at home consisting of food only. Two of these children had food that could be considered unhealthy. Three children who had food only at home went on to have food and drink at school breakfast, two children had a drink only and one child had food only at school breakfast. Six children who had food only at home did not attend school breakfast. Of the 12 children who consumed food only at home one child consumed a drink on the way to school that they brought from home and one that they bought from a shop on the way into school.

Finally, 8 children had nothing to eat or drink at home before they left for school. Three of these children went on to have food and drink at school breakfast, one child had food only, three children had a drink only and one child had nothing to eat or drink at school breakfast. One child who had

nothing to eat or drink at home brought unhealthy food from home to consume on the way to school.

Figure 5.1 illustrates the number of items reported by children in each breakfast sub-category at home, on the way to school and at school breakfast. For breakfast consumed on the way to school, the number of items brought from home and the number of items bought from a shop during the journey are presented separately.



**Figure 5.1:** Number of breakfast items consumed by children in each breakfast item sub-category at home, on the way to school and at school breakfast from School 1.

Figure 5.1 shows that cereal items were the most popular breakfast items consumed at home and at school. Interestingly, the majority of fruit items were consumed at school breakfast and all dairy products reported by children were consumed at home. The majority of unhealthy breakfast items (i.e. sweets, fast food, fizzy drinks and tea/coffee) were consumed at home and most of the items consumed on the way to school, both healthy and unhealthy were brought from home. Furthermore, when children's breakfast habits were considered in addition to their mode of travel to school, results showed that all children who consumed food or drink on the way to school adopted an active method of travel such as walking or cycling or used public transport (see Table 5.3). No children who travelled by car or by taxi consumed food on the way to school. Interestingly, three of the 10 children who reported consuming breakfast on the way to school reported bringing items from home that they also reported having for breakfast while they were at home. This might suggest that some children continued to eat the breakfast they started at home while on their way to school.

**Table 5.3:** Number of children from School 1 who consumed food or drink on the way to school and their mode of travel.

Mode of Travel to School	Total number of children that utilised each mode of travel	Number of children that consumed food or drink on the way to school	*Breakfast on the way to school obtained from:	
			Home	Shops
Walked	33	5	5	2
Car	6	0	0	0
Bus/Tram	6	3	3	0
Bike/Scooter	4	2	2	2
Taxi	1	0	0	0

\*Some children who brought food from home also bought food from a shop on the way to school

#### 5.3.1.2. School 2

Data from 48 children from School 2 were analysed. Overall, 36 children from School 2 reported that they consumed food and drink for breakfast, eight children had food only, two children had a drink only and two children had nothing at all to eat or drink for breakfast before the start of the formal school day.

Twenty-three children sampled from School 2 had food and drink for breakfast at home before they set off for school, though six of these children consumed at least one food or drink item at home that could be considered



unhealthy (i.e. sweets, fast food, fizzy drink or tea/coffee). Nine of the children who had food and drink for breakfast at home also had food and drink for breakfast at school. Three children who had food and drink at home had a drink only at school breakfast, 1 child had food only at school breakfast and 10 children who had food and drink at home did not attend school breakfast. One child who had food and drink at home for breakfast also brought unhealthy food for breakfast from home to consume on the way to school.

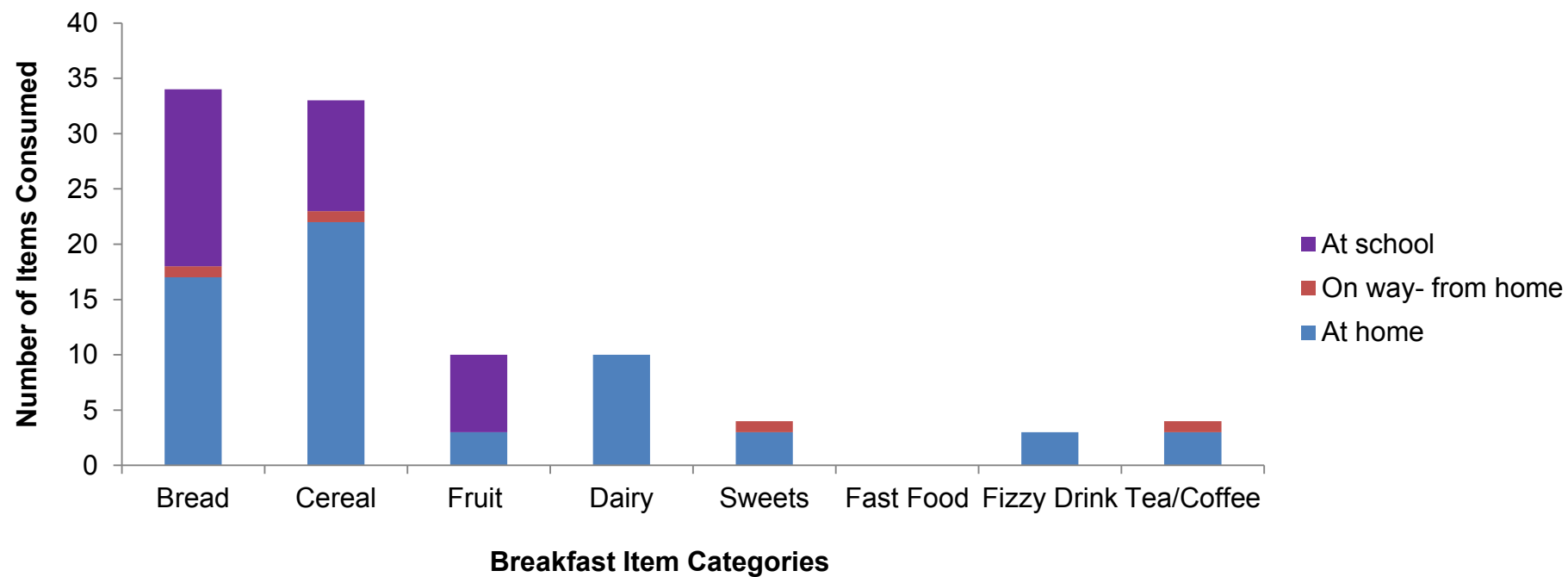
Four children from School 2 had a drink only at home for breakfast. Two of these children went on to have food and drink at school breakfast, one child had a drink only at school breakfast and one child did not attend school breakfast. No children who had a drink only at home consumed food or drink on the way to school.

Fourteen children from School 2 had food only for breakfast at home. One of these children had food that could be considered unhealthy. Of the fourteen children who had food only at home, three also had food only at school breakfast, two children had a drink only at school breakfast, three children had food and drink at school breakfast and six children did not attend school breakfast. One child brought food and drink from home to consume on the way to school; one of the items they brought could be considered unhealthy. Another child brought food only from home to consume on the way to school. No children who consumed food only at home bought food or drink from a shop on the way into school.

Finally, seven children had nothing to eat or drink for breakfast at home before they left for school. Five of these children consumed nothing on the way to school and went on to have food and drink at school breakfast. Two children who had nothing to eat or drink at home consumed nothing on the way to school and did not attend school breakfast.

Figure 5.2 shows the number of items reported by children in each breakfast sub-category at home, on the way to school and at school breakfast.

Breakfast purchased from a shop on the way to school has not been included in Figure 5.2 as no children from School 2 reported that they obtained breakfast from a shop on their way into school.



**Figure 5.2:** Number of breakfast items consumed by children in each breakfast food sub-category at home, on the way to school and at school breakfast from School 2.

Figure 5.2 shows that bread and cereal items were the most frequently consumed breakfast items by children in School 2. Following a similar pattern to the breakfast habits of children in School 1, all dairy items consumed by children from School 2 were consumed at home and all unhealthy items (i.e. sweets, fizzy drinks and tea/coffee) reported by children from School 2 were consumed at home or were brought from home to consume on the way into school. No children from School 2 reported having any breakfast items bought from a shop on the way into school.

Further investigation into children's breakfast food consumption in addition to their mode of travel to school showed that one child who walked and two children who travelled by car took breakfast from home to consume on the way to school (see Table 5.4). Following the same pattern of reporting as some of the children from School 1, all children from School 2 who reported that they brought food or drink from home to consume on the way to school reported the same items that they consumed for breakfast at home again possibly suggesting that children might have started their breakfast at home but continued to eat it on their way to school.

**Table 5.4:** Number of children from School 2 who consumed food or drink on the way to school and their mode of travel.

Mode of Travel to School	Total number of children that utilised each mode of travel	Number of children who consumed food or drink on the way to school
Walked	25	1
Car	18	2
Bus/Tram	4	0
Bike/Scooter	0	0
Taxi	1	0

### **5.3.2. Comparisons between schools for school breakfast attendees and non-attendees**

Mann Whitney U comparisons were carried out to determine whether differences existed between the healthy and unhealthy breakfast scores of school breakfast attendees and non-attendees from each of the two participating schools. Moreover, as children who attended school breakfast had opportunities to consume breakfast both at home and at school, scores were broken down to look separately at home breakfast and school breakfast as well as overall breakfast consumption for the school breakfast attendee group.

Comparisons showed that there was a significant difference between the overall healthy breakfast scores of school breakfast attendees from School 1

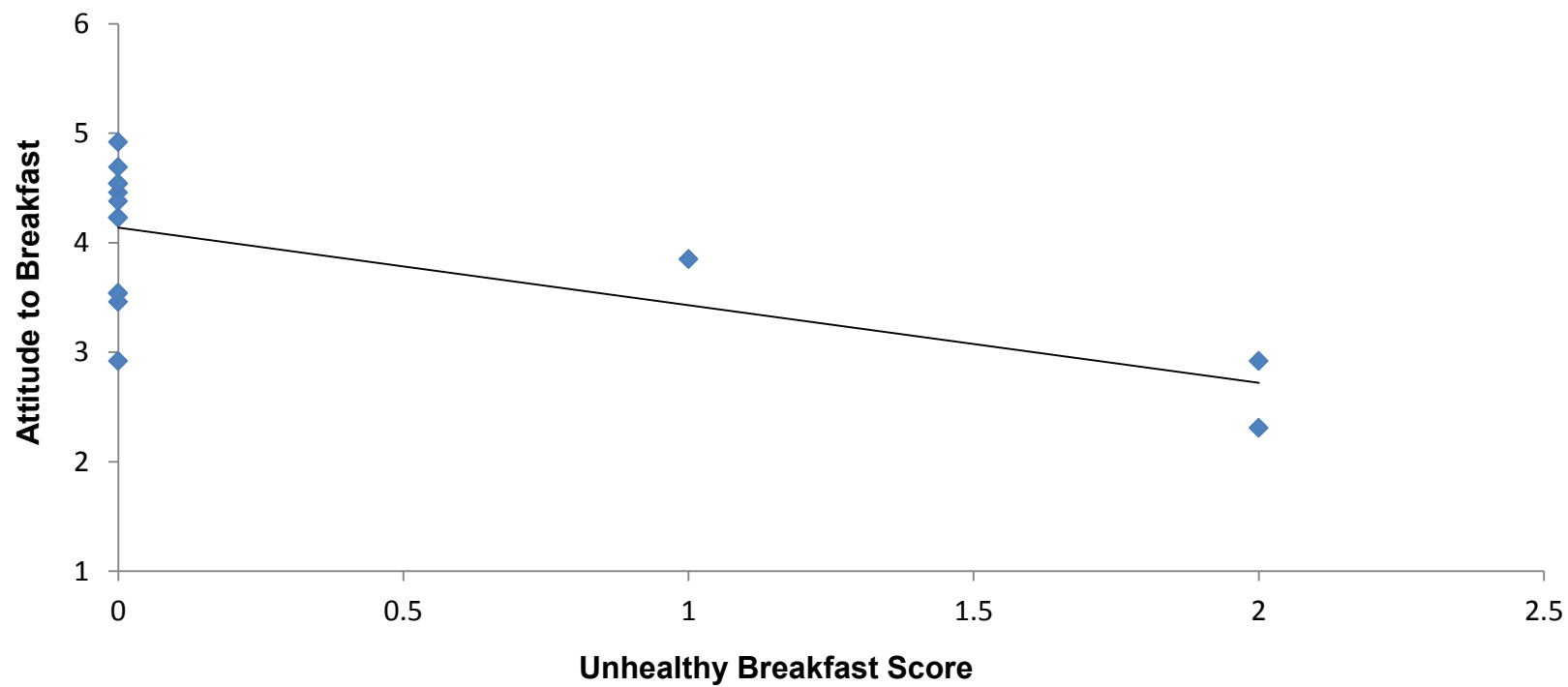
and School 2 ( $U = 289.00$ ;  $p = .005$ ) with school breakfast attendees from School 2 ( $Mdn = 2$ ;  $Range = 5$ ) reporting that they consumed significantly more healthy items for breakfast than school breakfast attendees from School 1 ( $Mdn = 1$ ;  $Range = 5$ ). When scores were broken down to allow consideration of home breakfast and school breakfast separately, no significant differences emerged between school breakfast attendees from School 1 and School 2 for home healthy breakfast scores ( $U = 367.50$ ;  $p = .091$ ) and school healthy breakfast scores ( $U = 380.00$ ;  $p = .138$ ). Finally, for overall unhealthy breakfast scores there was no significant difference between school breakfast attendees from School 1 and School 2 ( $U = 414.50$ ;  $p = .174$ ). It was not necessary to break the unhealthy breakfast score down to consider home and school breakfast separately as no unhealthy breakfast items were served at school breakfast.

Comparisons between non-attendees from School 1 and School 2 showed no significant differences between schools for overall healthy ( $U = 126.50$ ;  $p = .220$ ) and overall unhealthy ( $U = 155.50$ ;  $p = .793$ ) breakfast scores.

### **5.3.3. Attitude to Breakfast**

A series of correlations were carried out to determine whether a relationship existed between children's healthy and unhealthy breakfast category scores and their breakfast attitude scores. For School 1, a significant negative relationship was identified between Overall Unhealthy breakfast category scores and breakfast attitude scores for children who did not attend school breakfast ( $r_s = -.547$ ;  $p = .035$ ). However, it should be noted that this relationship appears to be driven by only 3 data points (see Figure 5.3). No further significant relationships were found between children's breakfast

attitude scores and their healthy and unhealthy breakfast category scores for School 1 for school breakfast attendees and non-attendees. The results of the analyses from School 1 are presented in Table 5.5.



**Figure 5.3:** Relationship between Overall Unhealthy scores and Breakfast Attitude scores for non-attendees at School 1.



**Table 5.5:** Results of correlations conducted on healthy and unhealthy breakfast scores and breakfast attitude scores for School 1.

	School Breakfast Attendees Attitude	Non-Attendees Attitude
Overall Healthy	$r_s = .074; p = .680$	$r_s = .238; p = .393$
Overall Unhealthy	$r_s = -.026; p = .886$	$r_s = -.547; p = .035^*$
Home Healthy	$r_s = .115; p = .523$	N/A
School Healthy	$r_s = .010; p = .957$	N/A

\* $p < 0.05$

For School 2, no significant correlations were identified between children's breakfast attitude scores and healthy and unhealthy breakfast scores for school breakfast attendees or non-attendees. The results of the correlations conducted on data from School 2 are presented in Table 5.6.

**Table 5.6:** Results of correlations conducted on healthy and unhealthy breakfast scores and breakfast attitude scores for School 2.

	School Breakfast Attendees Attitude	Non-Attendees Attitude
Overall Healthy	$r_s = .227; p = .351$	$r_s = -.058; p = .838$
Overall Unhealthy	$r_s = .374; p = .114$	$r_s = -.233; p = .403$
Before Healthy	$r_s = .413; p = .079$	N/A
School Healthy	$r_s = -.155; p = .528$	N/A

#### 5.4. Discussion

The current investigation set out to determine whether differences existed between the breakfast habits of school breakfast attendees and non-attendees before the start of the formal school day. Initial analyses conducted across schools showed that overall school breakfast attendees consumed more healthy items for breakfast than non-attendees. Furthermore, between schools comparisons showed that school breakfast attendees from School 2 consumed significantly more healthy breakfast items overall than school breakfast attendees from School 1. No significant differences were apparent between school breakfast attendees from School 1 and School 2 for home healthy breakfast scores and school healthy breakfast scores. There were also no significant differences between the overall healthy and overall unhealthy breakfast scores of non-attendees from School 1 and School 2. Further analyses carried out between school breakfast attendees and non-attendees within schools showed there were no

significant differences between groups in School 1 for overall healthy and overall unhealthy breakfast scores. Results of the analyses conducted on data collected from School 2 showed that school breakfast attendees consumed significantly more healthy breakfast items overall than non-attendees. No significant difference was found between school breakfast attendees and non-attendees from School 2 for overall unhealthy scores. Children's attitudes to breakfast were also investigated in relation to their healthy and unhealthy breakfast food consumption. Results showed a negative correlation between breakfast attitude scores and overall unhealthy breakfast scores for children from School 1 who did not attend school breakfast. No further significant correlations were identified.

The few significant findings that emerged from the current study lend support to previous research, which has suggested that the provision of breakfast in schools is positively associated with children's breakfast intake (Shemilt et al., 2004; Murphy et al., 2010) and this association might be even more pronounced for children who are most in need i.e. those living in lower socioeconomic households (Simpson et al., 2003). Free school meal entitlement is often used as an indicator of deprivation (e.g. Belderson et al., 2003; Moore et al., 2007) and in the case of the current study compared to School 2, School 1 had almost double the proportion of children entitled to free school meals and more than double the proportion of working-age adults claiming state benefits in the local area suggesting that the level of deprivation was greater for School 1 than for School 2. Consideration of the breakfast scores collected from both of these schools showed that overall children from School 2 who attended school breakfast consumed more

healthy items than children from School 1 thus demonstrating that level of deprivation may be associated with the quality of children's breakfasts as previous research has suggested (Sweeting & West, 2005; Pilgrim et al., 2012). Furthermore, no differences between schools were identified for children who did not attend school breakfast so there is a possibility that school breakfast was being attended by children in School 1 who needed it most i.e. those with the poorest breakfast habits though this is purely speculative and would require further investigation to determine whether this is the case.

When children's healthy and unhealthy breakfast scores were considered in relation to their attitudes to breakfast a negative relationship was apparent between the unhealthy breakfast scores and breakfast attitude scores of school breakfast non-attendees from School 1. This pattern of results mirrors previous findings by Tapper et al (2008) who also identified a negative relationship between children's unhealthy breakfast scores and their attitudes to breakfast. However, the identified correlation should be treated with caution as it appeared to be driven by a minority of participants.

Moreover, no further significant correlations between breakfast attitudes and healthy and unhealthy breakfast scores were identified in the current study.

Although previous research has demonstrated that a relationship exists between attitudes and breakfast habits (Tapper et al), the Theory of Planned Behaviour (TPB; Ajzen, 1985) asserts that in addition to their attitude, a person's behaviour is also driven by their perceptions of how others view the behaviour (subjective norm) and the ease with which they are able to carry out the behaviour (perceived behavioural control). Looking at the TPB in the

context of the current breakfast scheme it may be the case that some children had positive attitudes towards breakfast but had limited access to the healthy breakfast foods available at school; for example some children might have lacked time in the morning to consume the breakfast available at school (perceived behavioural control) or parents might have disapproved of the scheme (subjective norm) thus limiting children's access to the healthy breakfast items available. It would therefore be useful in future studies to look at children's breakfast habits under a TPB framework. Although TPB has been applied to children's breakfast consumption patterns (e.g. Dejong et al., 2009; Wong & Mullan, 2009) it has not been considered in relation to school breakfast participation. This would be an interesting area of investigation as it would help to inform policymakers and schools on the value of encouraging parental support for breakfast schemes and the importance of carefully addressing practical considerations such as school breakfast start times and the time allocated for breakfast.

Closer consideration of the foods and drinks that children had for breakfast and the places they consumed breakfast showed that the majority of children had breakfast at home and very few children skipped breakfast completely before the start of the school day. However, for some children the breakfast consumed at home was not substantial. For example, some children had a drink only at home and research has shown that consumption of a drink only for breakfast can lead to subsequent declines in memory and attention similar to those shown by children who consume no breakfast (Wesnes et al., 2003). Concurrently, some children consumed food only at home without having anything to drink and while children can obtain fluids from foods the

majority comes from drinks and by consuming food only for breakfast children increase their potential to experience dehydration and subsequent cognitive decline (D'Anci, Constant & Rosenberg, 2006). Results of the current study showed that some of the children who consumed a limited breakfast of food or drink only at home went on to consume food or drink or both at school breakfast thus supplementing their home breakfast to make an overall more substantial breakfast meal before the start of the school day. So it is possible that school breakfast is not required to provide an entire breakfast meal for some children but it may be useful in supplementing the breakfast that is available to them at home.

Findings from the current study also showed that some children consumed breakfast items that could be considered unhealthy such as fast foods, sweets, fizzy drinks and caffeinated drinks. This shows that during the pilot phases of the breakfast scheme the availability of school breakfast did not discourage some children from consuming unhealthy items for breakfast. However, it is important to note that the majority of unhealthy items consumed by children were obtained from home. Moreover, the majority of foods and drinks consumed on the way to school were also taken from home and were consumed during active travel. These findings have important implications for school breakfast interventions because they support previous arguments put forward by Dejong et al (2009) suggesting that parents and carers have a dominant influence over children's eating habits and therefore any school based interventions that aim to improve children's dietary habits need to engage parents to ensure that children are receiving consistent messages between home and school.

Finally, in considering what children had for breakfast and where they had breakfast, a small number of children reported having food and drink on the way to school and for many of these children the same foods and drinks were consumed on the way to school as were consumed at home. However, there was no way to determine in the current study whether children consumed separate lots of the same foods and drinks at home and on the way to school or whether children finished the breakfast they started at home while travelling to school. If the latter of these two potential scenarios is true then these results support the findings of Study 1 of the current thesis in which parents suggested that the time families spend at home in the mornings can often be rushed and children do not always have time to finish their breakfast at home thus offering further support for wider implementation of school breakfast to ensure children are allocated enough time to consume breakfast in the morning.

The previous point regarding an inability to determine whether breakfast was finished at home before children set off for school brings to light an important methodological consideration that should be made in future studies investigating children's breakfast habits during the morning before school. A useful adaptation to the measure used in the current study to address this issue would be to add a question asking children whether they finished their breakfast at home or continued to consume the same breakfast on their way to school. Additionally, it was apparent that some children involved in the current study had trouble with spellings or providing enough detail in their answers when free text responses were required as some provided illegible answers or answered 'food and drink' when more precise responses were

necessary. Providing children with pictures representing different breakfast foods and drinks might prove useful in reducing the number of children withdrawn from studies due to unusable answers. The provision of pictures could also allow additional options to be included in the questionnaire to allow more information to be obtained from children. For example, children in the current study, like in previous studies (e.g. Moore et al., 2007), tended to omit details of additions to breakfast foods such as any milk and sugar added to cereals and spreads added to toast. If the current measure was adapted so that children clicked on pictures of breakfast items consumed, additional options could open up when particular items were clicked i.e. if cereal was selected additional options such as milk, sugar and fruit could be made available for children to select thus providing a more detailed picture of the nutritional content of children's breakfast meals. Despite these limitations, the online measure was useful as it allowed a large amount of data to be collected from schools while providing schools with some flexibility in completion of the research tasks as it was not necessary for them to allocate time for a researcher to go in to collect data. The presentation of the questionnaire was also much simpler than it would have been had it been presented in paper and pencil form as the online format allowed some questions to be hidden until particular options were selected so children only saw questions that were relevant to them i.e. children were not presented with questions about what they had to eat and drink at school breakfast if they selected the option to say that they did not attend school breakfast. Such advantages suggest that online questionnaires may be a useful method of collecting data from children in schools.



In conclusion, the results of the current investigation show that the provision of school breakfast can help to ensure children start the day with a healthy breakfast. The current findings suggest that school breakfast is not only helpful to those children who skip breakfast at home completely but it may also act to supplement the breakfast children receive at home to ensure that overall they have a more substantial meal at the start of the school day. Very little evidence emerged from the current study to support the existence of a relationship between children's attitudes to breakfast and their breakfast habits. However, given that children's access to breakfast is potentially influenced by a number of factors in addition to their attitudes, further investigation under a TPB framework is warranted. Finally, the current study demonstrates that online questionnaires are a useful and adaptive tool for collecting data on children's breakfast habits.

## **CHAPTER 6: An observational study of children's behaviour in breakfast club**

### **6.1. Introduction**

It has been proposed that the amount of time a child spends concentrating on a task is probably the most important aspect of learning (Grantham-McGregor, 2005). Johnson, McGue and Iacono (2005) theorised that persistent disruptive behaviour in the classroom can lead to a decrease in the amount of time a child spends focussing on school-related tasks, which in turn can have a detrimental effect on long term academic attainment. It could therefore be argued that children's behaviour in the classroom during the school morning is particularly important as this is the time that schools generally teach core subjects such as English and Maths (Wile & Shouppe, 2011).

There is a common perception amongst some educators and advocates of school breakfast provision that attendance at school breakfast clubs can have a beneficial impact on children's behaviour at the start of the school day. For example, the Mayors Fund for London (2014) advised that 'A good start to the day improves child attendance, punctuality, concentration and behaviour' (Breakfast Clubs Delivered by Magic Breakfast, 2014). Similarly, West Lothian Council (2011) proposed that breakfast clubs help to 'improve attitude, behaviour and motivation to learn' (Schools- Breakfast Clubs, 2011). This reflects some of the views expressed by parents, children and school staff in Study 1 (Chapter 2) of the current thesis who suggested that children who attended breakfast clubs were calmer and more attentive at the start of

the school day than children who did not attend breakfast clubs. However, very little research has investigated the relationship between breakfast club attendance and children's behaviour, and the few studies that are available have yielded mixed results.

In a study by Bro et al. (1994) the effects of an in-class breakfast intervention on the attendance and behaviour of 10 adolescent males aged 14 - 18 years was investigated. Adolescents who were enrolled in a vocational welding class in a high school in Washington, USA received 'a nutritious breakfast' (p. 4) as they entered the classroom during the breakfast phases of the experiment. Two breakfast phases were implemented, which lasted for 20 consecutive school days. No breakfast was served during the two baseline phases which lasted 10 consecutive school days. Attendance data were collected by a researcher who marked adolescents as present if they were in the classroom at 8.10am when registration took place. Observational data were collected by the class teacher using a momentary time sampling method. The teacher scanned the classroom at five minute intervals and noted whether adolescents were on or off task. To be classed as on-task, adolescents had to be either collecting or setting up welding equipment, welding within a designated booth or returning equipment to the correct place. As all adolescents were required to be on task in the class at all times for safety reasons, an interval was only scored as on-task if all students were compliant at the time of observation; an interval was marked as off task if one or more adolescents were off task at the observation point. Bro et al. reported an increase in on-task behaviour following implementation of the

breakfast program. The program had no significant impact on adolescent attendance.

Contrary to the results of Bro et al. (1994), Shemilt et al. (2004) reported a negative relationship between school breakfast club attendance and the behaviour of children and adolescents. As part of a large scale investigation into breakfast clubs (described in Chapter 1 of the current thesis) Shemilt et al. collected data on behaviour through the Strengths and Difficulties Questionnaire (Goodman, 2001). The Strengths and Difficulties Questionnaire is a 25-item scale that measures: emotional symptoms (e.g. 'Many worries, often seems worried'); conduct problems (e.g. 'Often has temper tantrums or hot tempers'); hyperactivity/inattention (e.g. 'Easily distracted, concentration wanders'); peer relationship problems (e.g. 'Rather solitary, tends to play alone'); and prosocial behaviour (e.g. 'Shares readily with other children'). Ratings are made on a 3 point scale: 0=not true; 1=somewhat true; 2=certainly true. Based on the ratings of each sentence, children are categorised as 'Normal,' 'Borderline' or 'Abnormal' for each subscale. A Total Difficulties Score can also be obtained by summing the scores of all the subscales apart from the pro-social subscale. Shemilt et al collected Strengths and Difficulties Questionnaire data on the behaviour of primary school children aged 4 - 11 years from their class teachers. Adolescents aged 11 - 16 years provided self report data on the Strengths and Difficulties Questionnaire. Analysis of the data showed that primary school children aged 4 - 11 years who had attended breakfast club were more likely to have borderline or abnormal conduct, hyperactivity and total difficulties scores than children who had not attended breakfast club. While

adolescent breakfast club attendees were more likely to report borderline or abnormal pro-social scores than breakfast club non-attendees. Further qualitative data collected from teachers suggested that breakfast club attendance had resulted in some children becoming less well behaved and more difficult to manage in the classroom. Also, observations made by the research team showed that children were sometimes inadequately supervised and were allowed to engage in boisterous and rough play within breakfast clubs.

More recently, Murphy et al (2010) investigated the impact of breakfast club attendance on children's behaviour as part of a cluster randomised controlled trial carried out on a sample of year 5 and year 6 pupils (aged 9 - 11 years) from 111 primary schools in Wales, UK. Following consent from head teachers, schools were allocated randomly to a control condition, where no breakfast clubs were made available to pupils, or an intervention condition, where school breakfast clubs were implemented. At baseline and 12-months post implementation, teachers completed the Strengths and Difficulties Questionnaire (Goodman, 2001) for a subsample of 10 randomly selected children from each participating school. The hyperactivity/inattention subscale was of particular interest to the authors as they deemed this to be related to children's breakfast consumption and on-task behaviour based on previous research. Analysis of the Strengths and Difficulties Questionnaire data showed no significant difference in hyperactivity/inattention scores between children in the control and intervention conditions suggesting that in this instance breakfast club attendance did not appear to influence children's classroom behaviour. Although no significant differences were identified

between groups, it should be noted that teachers completing the Strengths and Difficulties Questionnaire were not blind to the treatment conditions so there is potential for demand characteristics to have influenced teachers' responses.

Overall, the results of previous research suggest that there may be a relationship between breakfast club attendance and children's behaviour that can carry over into the classroom and influence the amount of time children remain on task. However, this relationship is not clear cut as the results obtained by Murphy et al. (2010) showed no effect of breakfast club attendance on children's behaviour therefore more investigation is needed to determine whether breakfast club attendance does in fact influence children's behaviour. Moreover, no published research exists to describe children's behaviour within the breakfast club environment; research to date has focussed predominantly on children's ability to remain on task in the classroom following attendance at breakfast club or on reports of their behaviour in general according to scores calculated from the Strengths and Difficulties Questionnaire. Furthermore, as mentioned previously, children's behaviour is frequently linked to the foods that they consume but the activities that children take part in within breakfast club have not been investigated in relation to their behaviour. The aim of the current study is therefore to address this dearth in the literature by observing children's behaviour within the breakfast club setting to find out whether children exhibit more positive or negative behaviours in general while in breakfast club and whether the activities that children take part in within breakfast club influence their behaviour. According to Nock and Kurtz (2005) "observational data

have greater external or ecological validity than behavior rating scales, as they provide a measurement of the behavior as it is actually occurring in the school context” (p. 360). However, as there are no published data on children’s behaviour within breakfast club, there are currently no available observation criteria that would allow children’s behaviour in breakfast club to be rated. Many published studies where children’s behaviours have been observed have taken place within the classroom environment (Vile Junod et al., 2006) or on the school playground (Craig, Pepler & Atlas, 2000) and although the criteria used within such studies have been reported to be reliable measures of the behaviours under investigation, they would not be suitable for the observation of behaviour in breakfast clubs. Breakfast clubs offer children the opportunity to engage in activities that do not require such quiet and focussed attention as classroom activities but require more restraint than playground activities as space in breakfast clubs is often limited to the school hall or a classroom where activities take place alongside the serving of breakfast. A further aim of the current study was therefore to devise a set of observational criteria that would be relevant to children’s behaviour within the breakfast club setting.

## **6.2 Study 5a: Development of observational criteria relevant to breakfast club**

### **6.2.1. Method**

#### **6.2.1.1. Participants**

Following ethical approval being granted by the School of Life Sciences at Northumbria University children from two primary school breakfast clubs

based in the North East of England were invited to participate in the current study. Both participating breakfast clubs were open to children aged 5 - 11 years and both were of similar size accommodating around 10 children per day. Details of the two participating schools and their breakfast clubs are presented in Table 6.1 and Table 6.2 respectively.



**Table 6.1:** Characteristics of schools participating in Study 5a and school surrounding areas.

Schools	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1	187	Community	7.5%	0%	39.9%	25%	97.7%
2	262	Voluntary Aided	4.2%	7.4%	21%	22%	97.9%

**Table 6.2:** Characteristics of breakfast clubs participating in Study 5a.

School	Cost	Activities	Breakfast	Led by	Availability	Duration
1	£2.00 per day	Table top activities, pretend play, construction	Cereal, toast, beans, eggs, fruit, yogurt, juice	Teaching Assistants	Mon-Fri 8.00am-8.50am Term time only	7 years
2	£2.00 per day	Ball games, skipping, toys, drawing	Cereal, toast, pancakes, juice, fruit	Teaching assistant and lunchtime supervisor	Mon-Fri 8.00am-8.50am Term time only	4 years

Use of an opt-in method of parental consent resulted in only a small number of children returning their forms to school giving consent for them to participate in the study so it was not possible to observe the behaviour of all children within the breakfast clubs. The sample of children observed consisted of nine females and three males, aged 6:11 – 10:4 (mean age = 8:4). Five children were from School 1 and 7 children were from School 2. All children attended breakfast club on at least two school days per week during the two week study period and were reported by staff to have attended breakfast club for most weeks during the school year. Additionally, all children who were observed consumed breakfast items within breakfast club.

#### **6.2.1.2. Equipment**

A small MP3 player with in-ear headphones was used to allow the observer to discretely listen to a pre-recorded track that played an audible beep at 20 second intervals. The sound was used to alert the researcher to the end of each observation and recording interval.

To allow the observer to document children's behaviour, individual record sheets were created for each child on each day they were observed. The record sheets were separated into intervals used to represent the beginning middle and end of the breakfast club. The record sheets were attached to a clipboard so that they would remain in the same order across the duration of the observations.

### **6.2.1.3. Procedure**

A researcher visited the participating breakfast clubs to describe the nature of the research to children and to distribute parental consent forms. The researcher explained to the children that she would be visiting their breakfast club to see what kind of things they do when they are there and sometimes she would write things down to help her to remember what kind of things they did; children were assured that their names would not appear on the observation records. Children were told that before the researcher could write about them in breakfast club, they had to take a consent form home for the person who looks after them to sign. Children were also told that if they did not want the researcher to write about them in breakfast club they could let her know and she would not write about them.

The presence of an observer in a naturalistic setting can result in children changing their usual behaviour; this is known as participant reactivity. However, once children become familiar with the presence of an observer they revert back to displaying behaviours that they would typically within that setting (Robson, 2001; Gravetter, 2008). In an effort to reduce participant reactivity one observer attended breakfast club for five consecutive school days prior to the commencement of observations. The observer arrived before all children and consistently sat in the same area of the breakfast club each day where all breakfast club activities could be viewed without imposing on children's breakfast consumption or activity involvement. The pre-observation period gave the observer the opportunity to find out which children had returned consent forms and to become familiar with these children before formal observations began.

On observation days, each target child was observed across a 45-minute period with up to five children being observed on one day. Each child was observed for 20-seconds then the observer spent 20 seconds noting down the dominant behaviour exhibited by the target child during the 20-second observation interval. At the end of the recording interval the observer moved on to observe the next target child and continued to observe each child in the same manner for the duration of the breakfast club session. On occasions when fewer than five children were observed, the observer ensured that timings remained consistent so there was always the same break of 2 minutes and 40 seconds between each observation/recording interval allocated to each child. When all observations were complete, children were verbally debriefed and were given a written debrief form to take home to inform their parent or carer that the research had taken place.

### **6.2.2. Results**

Initially, all behaviours included on the observation records were categorised as either positive or negative. Positive behaviours were classified as those behaviours deemed appropriate within the context of the breakfast club; children's engagement in these behaviours did not result in another person being hurt or upset and did not lead to children being reprimanded by staff. Conversely, behaviours coded as negative were reprimanded by staff and/or resulted in conflict between peers. Inattentive behaviours such as wandering the room were also considered negative as previous research has linked such behaviour to delinquency (Pardini, Obradovic & Loeber, 2006).

Closer consideration of the behaviours included in the positive and negative categories showed that further distinctions could be made between

behaviours within these categories. For the positive category, three different subcategories of behaviour were apparent: 1) *On-task independent*: a child quietly engaged in an activity and not involved in any kind of social exchange. A child standing back and watching the behaviour of another in the room was also coded under this category as Rubin (2001) explained that watching others is a way of gathering information and therefore this could be considered exploratory behaviour; 2) *On-task social*: a child engaged in an activity while chatting to another person; 3) *Off-task social*: a child engaged in conversation with another person while not carrying out any other activity. Similarly for the negative category, 3 distinct subcategories of behaviour emerged: 1) *Off-task antisocial*: victimising or arguing with another person; 2) *Active distraction*: disruptive or boisterous behaviour such as shouting inappropriately or running around in a space where running is not permitted; 3) *Passive distraction*: lack of focus on anything in particular. A *Not Visible* category was also included aside from the positive and negative behaviour categories for when children left the room and their behaviour was unobservable. Details of the behaviours listed under each category are presented in Table 6.3.

**Table 6.3:** Behavioural categories

	Behavioural	Example Behaviours
	Categories	
Positive Behaviours	On-task independent	Pouring juice
	On-task social	Playing catch with peer
	Off-task social	Chatting to peers

Negative Behaviours	Off-task anti-social	Conflict over game
	Active distraction	Crawling around the floor
	Passive distraction	Wandering around the room

### 6.2.3. Brief Discussion

The aim of Study 5a was to develop a set of observational criteria that would be appropriate for observing children's behaviour within breakfast club settings. The behaviours exhibited by 12 children within two breakfast clubs were coded into six behavioural categories; three positive and three negative. However, the criteria were devised based on the behaviour of a small sample of children from two primary school breakfast clubs, therefore further investigation through observations of children's behaviour in different breakfast clubs is warranted to determine whether the observational criteria are relevant to breakfast clubs beyond those observed in the current study. Moreover, although a multitude of behaviours were observed using the time sampling method where behaviours were recorded at 20 second intervals, on many occasions the same behaviours were recorded across two intervals suggesting that a longer observation time could be used. According to Berkhout et al (2008) children's behaviour during play does not tend to change frequently therefore a five-minute observation interval is acceptable for observing children's behaviour in a play-based situation. There are currently no guidelines regarding an optimal observation period for children's behaviour in breakfast club but as children spend time playing in breakfast club, use of five-minute observation intervals in future investigations should be considered.

A further methodological consideration that should be made in future observational studies of breakfast clubs concerns the way in which children's behaviours are observed. In a recent review of the literature surrounding breakfast and children's behaviour, Adolphus et al (2013) pointed out that real-time observations where behaviours are monitored and recorded as they occur can be challenging and prone to observer fatigue. Adolphus et al recommend that video recordings should be employed where possible as the ability to pause and replay footage increases accuracy of observations and allows behaviour to be coded by multiple observers therefore improving reliability of reported findings.

Finally, the opt-in method of consent used in the present study resulted in a small sample size as a number of children did not return parental consent forms. According to Rose and Asher (1999) "failure to return forms is typically due to parents' busy lives rather than disapproval of their child's participation" (p. 72). There is a possibility that this was the case in the current study as the forms distributed to parents and carers asked them to return forms to specify whether or not they wanted their child to be included in the study and no parents returned forms opting their child out suggesting that they did not disagree with their child's participation in the research but did not get around to returning the form to opt them in either. In future it would be useful to adopt an opt-out method of consent to attempt to increase the number of children involved in the research and to reduce the burden placed on parents to return forms to school.

The behavioural criteria devised in Study 5a were used to observe children's behaviour in Study 5b to determine whether there was a difference between

the number of positive and negative behaviours exhibited by children within breakfast club and to consider whether the activities that children engaged in during breakfast club made a difference to the behaviours they displayed. Taking into consideration the methodological issues that were raised within Study 5a, Study 5b adopted an opt-out method of consent and children's behaviours were filmed within the breakfast club setting so that subsequent coding could be completed.

### **6.3. Study 5b: Observation of children's behaviour in breakfast club**

#### **6.3.1. Method**

##### **6.3.1.1. Participants**

Following ethical approval from the Faculty of Health and Life Sciences Ethics Committee at Northumbria University, the Head Teacher of a primary school based in the North East of England provided consent for children's behaviour to be filmed in the school's breakfast club. Details of the participating school and their breakfast club are provided in Table 6.4 and Table 6.5 respectively.

The Head Teacher acted in loco parentis to allow all children attending breakfast club to participate in the research unless they were opted out by their parents. Subsequently, no parents opted their children out of the study and all children were happy to participate. Although the behaviour of breakfast club staff members was not coded all staff provided written consent for filming to take place within the breakfast club whilst they were present.



**Table 6.4:** Characteristics of school participating in Study 5b and school surrounding area.

School	School Demographics <sup>a</sup>					School Local Area Demographics <sup>b</sup>	
	Pupils on roll (N)	School Type	Pupils with special educational need	Pupils with English as additional language	Pupils entitled to free school meals	All people of working age claiming a key benefit <sup>c</sup>	% White British
1	285	Community	2.1%	1.7%	18.2%	19%	98.0%

**Table 6.5:** Characteristics of breakfast club participating in Study 5b.

School	Cost	Activities	Breakfast	Led by	Availability	Duration
1	£2.00 (for 7.30am arrival)	Drawing and colouring, construction,	Cereal, yogurt, toast, fruit, juice	Teaching Assistants	Mon-Fri 7.30am-8.55am Term time only	6 years
	£2.50 (for 8.15am arrival)	television, books, board games, physical activity games				

Twenty-five children aged between 3 and 11 years were filmed within the breakfast setting during the seven-day study period. The behaviour of all children in attendance was filmed but it was necessary to exclude seven children from the coding element of the study. Two children were excluded from coding as they arrived at breakfast club in time to participate in only one activity so it was not possible to look at their behaviour across different activities. A further five children were withdrawn as they only attended breakfast club on one occasion during the study period. The behaviour of the remaining 18 children (nine males and nine females) was observed and coded according to the procedure outlined below. It was not possible to calculate children's exact ages as the adoption of an opt out method of consent meant that children's dates of birth could not be obtained.

#### **6.3.1.2. Equipment**

Two VIO POV-HD cameras (Extreme Technologies, Minneapolis) were set up within each of the two rooms where breakfast club sessions took place. Each camera was disguised within a box file attached to a lever-arch file so only the camera lens was visible through an existing hole in the lever-arch file.

#### **6.3.1.3. Procedure**

One week after the deadline for the return of parental consent forms, filming began in breakfast club. Approximately 10 minutes before the start of breakfast club, two cameras were set up in the Breakfast Club Room where children spent up to 45 minutes participating in desk top activities such as board games and Lego. Breakfast club began in this room at around 7:30am each day and children remained there for around 45 minutes before moving

into the school hall. The cameras were positioned so that children's behaviour could be filmed without the presence of the cameras being obvious to children and so that all areas of the breakfast club room were in camera shot. Filming began before children entered the room so that the researcher could avoid being seen by the children. Filming was terminated and cameras were removed after children had moved on to the School Hall where they spent around 45 minutes having breakfast and participating in physical activities such as ball games. While children spent time in the Breakfast Club Room, cameras were set up in the School Hall and filming began around 10 minutes before children arrived so the researcher would not be seen by the children. Filming was terminated and the cameras were removed after children had left the School Hall and gone on to their classes. Filming was conducted according to the outlined procedure on seven school days. When filming was completed all children were verbally debriefed and were given a sticker and a pencil as a token of appreciation for their participation in the research. Children were also given a written debrief letter to take home to inform their parent or carer that the study had been completed.

#### **6.3.1.4. Behavioural Coding**

The recordings of children's behaviour within the breakfast club sessions were subsequently coded according to the three positive (On-task Independent; On-task Social; Off-task Social) and three negative (Off-task Antisocial; Active Distraction; Passive Distraction) behavioural criteria devised in Study 5a. As children arrived at breakfast club at different time points the behaviour of each child was observed and recorded individually.

For each child, the time that they arrived at breakfast club was noted then that child's behaviour was observed and the footage was paused at 5 minute intervals. The behaviour that children were engaged in at the 5 minute interval point was recorded along with any additional relevant notes such as unexpected incidents observed that might have influenced children's behaviour. The behaviour of each child was observed across the entire duration of one breakfast club session.

#### **6.3.1.5. Second Coding**

In order to determine the accuracy of the first observer's interpretation of children's behaviour just over 10% of the data (i.e. 2/18 participants) were coded by a second observer. Analysis showed that there was moderate agreement between the first and second observer (Kappa coefficient=.585;  $p<.001$ ).

The main discrepancy between the two observers' interpretations of children's behaviour was concerned with whether a child engaged in a task while not appearing to speak to anyone could be considered to be working independently if they were seated at a table with other children who were obviously interacting with peers at the same table i.e. the observed child could have been listening to the conversation without actively engaging in it. This difficulty in interpretation emerged as a result of the cameras used to record children's behaviour not being able to detect sound in detail enough to hear children's interactions thus observations were based on children's motor behaviours. For this reason, children's behaviours were analysed based on positive and negative behavioural groupings as these were easier

to interpret than more detailed behaviour (i.e. independent vs social behaviours).

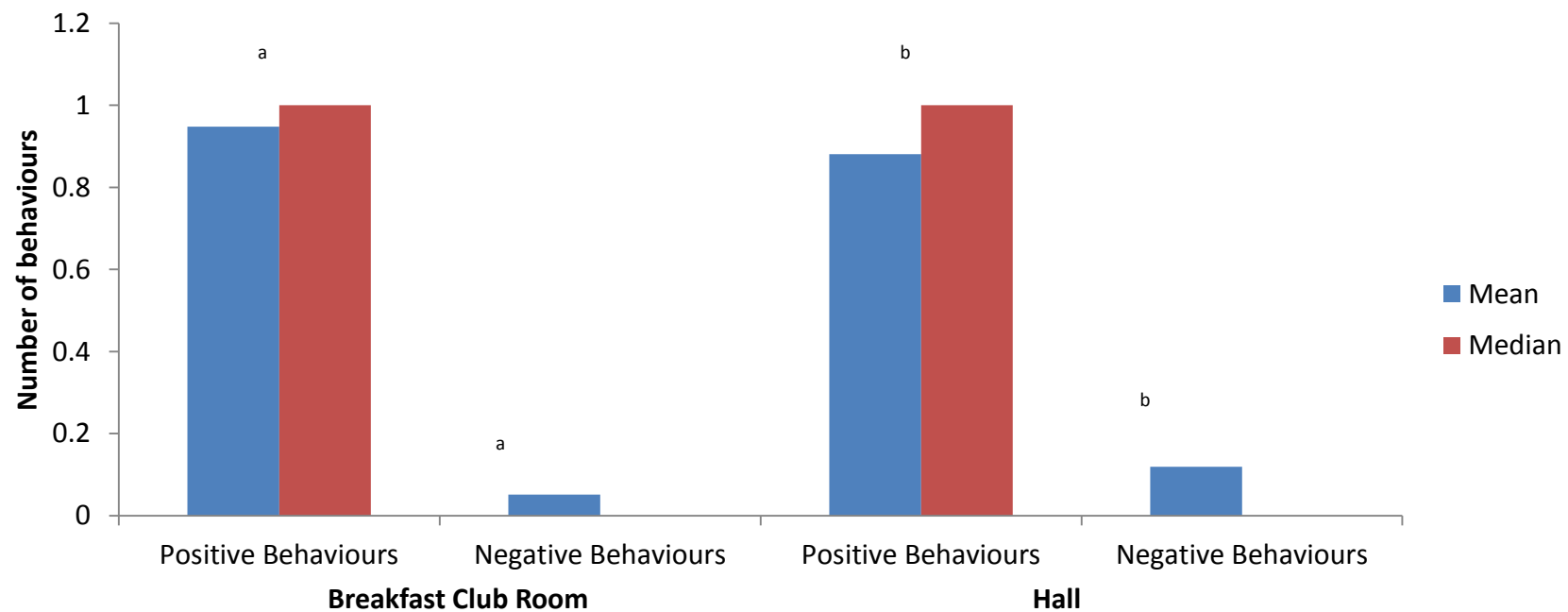
#### **6.3.1.6. Analysis**

To account for the different number of intervals recorded for each child, the total number of positive behaviours and the total number of negative behaviours recorded for each child were summed and divided by the number of recorded intervals to give mean positive and negative behaviour scores for each child in the breakfast club room and the hall.

Due to the small sample size and the non-normal distribution of the data (see Appendix Y) non-parametric analyses were conducted. Wilcoxon signed rank tests were used to compare the mean numbers of positive and negative behaviours within the breakfast club room and the hall. Wilcoxon signed rank tests were also used to determine whether there was a difference between rooms in terms of the number of positive behaviours displayed by children and the number of negative behaviours displayed in each room. Further analysis was carried out to consider whether children's behaviour changed across the duration of the breakfast club session. The first, middle and last intervals recorded for each child across the duration of the entire breakfast club session were scored with 1 given for a positive behaviour and 0 given for a negative behaviour. Scores were then compared using Wilcoxon signed rank tests to identify any differences between the first and middle interval, the middle and last interval and the first and last interval.

### **6.3.2. Results**

Wilcoxon signed rank analyses showed that there was a significant difference between the positive and negative behaviour scores of children in the breakfast club room ( $Z = 3.896$ ;  $p = .000$ ) and the hall ( $Z = 3.720$ ;  $p = .000$ ). In both environments children displayed significantly more positive than negative behaviours. This is illustrated in Figure 6.1 with same letter indices used to indicate significant differences.



**Figure 6.1:** Mean and median positive and negative behaviour scores for children in the breakfast club room and hall (<sup>ab</sup>p <.001)

Further Wilcoxon signed rank comparisons made between the breakfast club room and the hall showed that there was no significant difference between the number of positive behaviours displayed in each room ( $Z = 1.497$ ;  $p = .134$ ). Similarly no significant difference was identified between the number of negative behaviours displayed in each room ( $Z = 1.497$ ;  $p = .134$ ).

Finally, results of the Wilcoxon signed rank tests used to identify changes in children's behaviour across the duration of the breakfast club session showed no significant differences between the first and middle interval ( $Z = .272$ ;  $p = .785$ ), the middle and last interval ( $Z = 1.222$ ;  $p = .222$ ) and the first and last interval ( $Z = 1.342$ ;  $p = .180$ ).

### **6.3.3. Brief Discussion**

The aim of Study 5b was to investigate whether children's behaviour in breakfast club was more positive or negative and to determine whether the type of activity that children engaged in (i.e. quiet or active) made any difference to the number of positive and negative behaviours displayed. Results showed that children displayed more positive than negative behaviours while engaged in quiet and active tasks and there were no significant differences between activities in terms of the number of positive or negative behaviours displayed i.e. children did not display more positive or negative behaviours in one type of activity compared to the other. Moreover, children's behaviour did not appear to improve or deteriorate across the duration of the breakfast club session (as indicated by comparisons made between behaviour displayed during the first, middle and last interval of breakfast club). The current findings support ideas put forward in Study 1 (Chapter 2) of the current thesis to suggest that breakfast clubs provide



children with a positive start to the school day thus challenging the findings of Shemilt et al (2004) who reported that children's behaviour in breakfast clubs can be boisterous. However, it is important to acknowledge that the level of supervision within breakfast clubs might be a crucial factor in determining children's behaviour as Shemilt et al argued that poor behaviour in breakfast clubs might be a result of inadequate supervision. The breakfast club observed in the current study was supervised by two members of school staff who were responsible for between 11 and 16 children during each breakfast club session. Furthermore, each breakfast club session recorded followed the same routine each day with children always being offered quiet, table top activities in the breakfast club room followed by breakfast and active tasks in the hall. Any displays of inappropriate behaviour were dealt with quickly by breakfast club staff and even when more boisterous games such as dodge ball were played, the breakfast club staff ensured that the noise level was kept under control. According to Sytsma, Kelley and Wymer (2001) "routines are thought to moderate impulsivity and over-activity in preschool and elementary children, while aiding development of self-control" (p. 241). They further suggest that routines might support positive behaviour by ensuring a predictable environment and encouraging rule governed behaviour. It might be the case that the combination of adequate staffing and a fixed routine in the breakfast club observed in the current study led to the predominant display of positive behaviours suggesting that routine and adequate staffing are key elements that require consideration in breakfast club delivery.

Unfortunately it was not possible in the present study to investigate whether the positive behaviours displayed by children in breakfast club continued into

the classroom. Moreover the behaviour of breakfast club attendees could not be compared to non-attendees in the classroom at the start of the school day. Ethical approval was provided by the ethics committee at Northumbria University to allow filming to take place in classrooms following breakfast club but it was stipulated that *all* children must provide consent and must obtain parental consent before filming in class can take place. However, four parents of children who did not attend breakfast club opted their children out of the study and seven children did not consent to their behaviour being filmed within the class so it was not possible to conduct this aspect of the study as planned. Adolphus et al (2013) recently suggested that filming behaviour provides a “more accurate and ecologically valid” (p. 23) measure of behaviour than real time observations. However the current study demonstrates that the adoption of this method in schools is challenging.

#### **6.4. Conclusions**

Overall the current study showed that children’s behaviour within the breakfast club setting is consistently positive with few negative behaviours being observed. Moreover, it was evident in the current study that when routines are structured and breakfast club staff are consistent in their expectations of behaviour children can be allowed to engage in quiet or active tasks with no significant detriment to their behaviour.

The current study also proposes a set of criteria suitable for the observation of behaviour within breakfast clubs. While the criteria were only used within three schools in the present investigation, children were observed engaging in a multitude of activities within the breakfast club settings of different

schools and the criteria suitably encompassed all behaviours that were displayed. The use of a second coder in Study 5b highlighted that an inability to detect children's voices through filmed observation footage makes fine coding of children's behaviour difficult. However, the proposed observational criteria were successful in allowing observers to distinguish and agree upon displays of positive and negative behaviours. Further investigations are needed to validate the observational criteria and to test their suitability for use across different breakfast club models, for example when breakfast is served within the classroom or within a community setting.

Moreover, research is needed to determine whether the positive start to the school day that children encounter in breakfast club carries over into the classroom. Given that some children do not attend breakfast club every day, it would be useful to conduct an investigation comparing children's behaviour in the classroom on days they attend breakfast club compared with days they do not attend breakfast club to determine whether differences exist.

Furthermore, given that a child's ability to focus on a task is a key aspect of learning (Grantham-McGregor, 2005) it would be interesting to measure children's attention at various points across the school morning following breakfast club attendance and non-attendance to see whether observed behaviour correlates with objective measures of attention.

Despite the small number of breakfast clubs included in the current study and observations being limited to the breakfast club setting the current findings make an original contribution to the research literature on breakfast clubs as this is the first study where children's behaviour within breakfast clubs has been observed and reported. Additionally, there are currently no

published observational criteria suitable for use within the breakfast club setting. The current study addresses this gap in the literature by proposing a set of breakfast club observational criteria that warrant further investigation and validation.

## **CHAPTER 7: General Discussion**

### **7.1 Summary of objectives**

The overarching aim of the current thesis was to investigate the potential association between primary school breakfast club attendance and children's social relationships and behaviour. A review of the literature surrounding children's breakfast habits, breakfast club attendance and associated outcomes revealed that very little research has been conducted on breakfast clubs within the UK. Given the paucity of UK-based research into breakfast clubs Study 1 (Chapter 2) set out to investigate the views of parents, children and school staff to gain an insight into the advantages and disadvantages of breakfast clubs in the UK. Breakfast clubs based in two different UK regions (i.e. North East and North West of England) utilising school led and Local Authority led schemes were reported on revealing a multitude of similar benefits and drawbacks of breakfast clubs across both areas. The initial literature review further revealed that the majority of research conducted into the effects of school breakfast participation has focussed on the impact of the breakfast meal on outcomes such as cognition (e.g. Defeyter & Russo, 2013) and academic performance (e.g. Young-So, 2013) while the potential influence of the social environment and the time that children spend with one another in breakfast clubs has received little attention. Studies 2 and 3 therefore sought to determine whether an association existed between school breakfast club attendance and children's experiences of their relationships with various members of their social network including parents, peers and school staff. Study 2 looked specifically at the quality of children's

relationships with their best friend and class teacher as well as their experiences of peer victimisation and their treatment of others. What is more Study 2 was conducted over a longitudinal period of 12 months in an effort to identify any changes in children's relationships and school breakfast participation across time. For Study 3 children's perceptions of social support and school engagement were measured cross sectionally. For both studies 2 and 3 the scores of school breakfast club participants were compared to scores collected from children who attended after school clubs, those who attended both breakfast *and* after school clubs and children who attended no school clubs outside of formal school time. Very few differences were identified between groups for any of the aspects of social relationships investigated. However, the complex nature of investigating outcomes relating to children's out of school club participation across time became apparent. The study findings and related methodological issues are discussed in detail later in the current chapter. Study 4 (Chapter 5) aimed to determine whether children attending a school in an area of higher SES consumed more healthy items and fewer unhealthy items for breakfast than children attending a school in an area of lower SES. This study was relevant as previous research has shown that SES can influence the quality of children's breakfast consumption i.e. children from lower SES tend to consume breakfasts of poorer nutritional quality (Tapper et al., 2008). The final study of the current thesis (Study 5, Chapter 6) focussed on children's behaviour within the breakfast club setting. Breakfast clubs are often promoted as a means of providing children with a settled start to the school day that can subsequently lead children to behave more positively in the

classroom in the morning. However, existing evidence to support the argument that breakfast club attendance leads to more positive behaviour is scarce and predominantly anecdotal; some large scale studies have found that breakfast club attendance makes no difference to children's behaviour (e.g. Murphy et al., 2010) and one UK-based study involving children and adolescents from primary and secondary schools reported an association between school breakfast club attendance and problems with conduct and hyperactivity. In discussing their findings Shemilt et al (2004) argued that inadequate supervision and an acceptance of rough and boisterous activities within some breakfast clubs led to some children being more unruly and difficult to settle in the classroom at the start of the school day. Moreover, a recent review of the literature on the effects of breakfast on behaviour and cognition highlighted the lack of observational studies in this area (Adolphus et al., 2013). Study 5 therefore adopted an observational method utilising real time recordings of multiple breakfast club sessions to determine whether children's behaviour was more positive or negative within breakfast club sessions and to consider whether the activities that children undertook in breakfast club made any difference to the number of positive and negative behaviours they displayed. A set of observational criteria appropriate to the breakfast club setting were also developed and used to code children's behaviour as there are currently no criteria available within the research literature that are suitable for coding children's behaviour within breakfast club settings.

## **7.2. General summary of findings**

The results of the studies presented within the current thesis provide a unique and timely contribution to the research literature on UK-based school breakfast provision. Through Study 1 (Chapter 2) it became apparent that breakfast clubs are associated with a multitude of perceived benefits relating to dietary, social, behavioural and educational outcomes, which can extend beyond the breakfast club into the family home and in the classroom at the start of the day. However, it was also evident that there are drawbacks associated with the provision of breakfast in schools particularly relating to the breakfast served and the extent to which it complies with current food based standards and the financial costs of providing breakfast to children in schools. The findings provide a useful point of reference for researchers, breakfast club providers and policy makers as similar advantages and disadvantages were identified for school led and Local Authority led breakfast provision in the North East and North West of England.

Study 2 (Chapter 3) showed no differences between breakfast club attendees, after school club attendees, breakfast *and* after school club attendees and school club non-attendees in terms of the quality of children's relationships with their best friends and class teachers, their experiences of peer victimisation or their expression of victimising behaviours towards their peers. However, the most noteworthy finding from Study 2 was that children's attendance at breakfast clubs and after school clubs is highly variable across time making longitudinal investigation extremely difficult thus challenging arguments put forward in previous papers to suggest that more longitudinal investigations into out of school club attendance and children's



relationships are needed (Poulin & Denault, 2013). Looking cross sectionally at children's out of school club attendance in relation to their perceptions of school engagement and social support received from parents, best friends, classmates, teachers and the school community revealed a consistent pattern of results. The trend in the data showed that school breakfast club attendees generally provided higher ratings of perceived frequency and importance of support and perceptions of school engagement than children who attended after school clubs, both breakfast *and* after school clubs and those who attended no clubs but only a small number of differences between groups reached statistical significance (Study 3, Chapter 4).

Study 4 (Chapter 5) showed that children who attended breakfast club in a school of higher SES consumed significantly more healthy breakfast items than children who attended breakfast club in a school of lower SES, thus offering some support to previous research evidence suggesting a link between breakfast habits and SES (Tapper et al., 2008). Finally, in Study 5 (Chapter 6) children's behaviour was identified as being more positive than negative during breakfast club sessions and was found to be consistent across sessions i.e. it did not improve or deteriorate between the start, middle and end of breakfast club. Similarly, there were no significant differences in children's behaviour when the number of positive and negative behaviours displayed were compared between quiet and boisterous activities. The findings from each study and the unique contribution that each study makes to the research literature are discussed in detail in subsequent sections of the current chapter.

### **7.3 Advantages and disadvantages of school breakfast clubs**

In light of the lack of research investigating school breakfast clubs in the UK it was necessary to determine what parents, children and school staff deemed to be the key advantages and disadvantages of breakfast clubs before moving on to investigate specific outcomes relating to children's breakfast club attendance. Study 1 makes a unique contribution to the research literature pertaining to school breakfast clubs as no studies to date have presented the views of parents, children and school staff within a single project. Moreover, two different approaches to the delivery of breakfast clubs (i.e. school led and Local Authority led) in two different regions were presented thus providing a comprehensive representation of school breakfast provision in low income areas of the UK.

Food was unsurprisingly recognised as an important component of breakfast clubs by parents, children and school staff. The provision of breakfast at school was thought to help to address the issue of breakfast skipping amongst children who would otherwise start the school day without it. Interestingly it became apparent that breakfast skipping did not always occur due to a lack of available food at home as is often the case portrayed in the media (e.g. Nolan, 2013) but at times children chose not to eat at home because of a lack of appetite before setting off for school. Additionally, it was suggested that some children preferred to eat breakfast at school and were more willing to try healthier breakfast options than they would be at home. However, Study 1 also revealed that breakfast clubs do not always enforce food based standards resulting in children being able to consume prohibited foods such as chocolate spread. There were also concerns raised by

parents surrounding the addition of sugar to cereals within breakfast clubs, which is allowed according to current food based guidelines. The points raised in Study 1 surrounding the provision of the school breakfast meal have important implications for breakfast club leaders and school food policy makers. It is evident that school breakfast clubs have the potential to improve children's breakfast habits by supporting regular breakfast consumption and encouraging them to try new foods. This is important as children's breakfast habits have been reported to track into adulthood and have been found to influence adult health outcomes (Smith et al., 2010; Vereecken, Ojala & Jordan, 2004) thus investment in school breakfast provision has wider implications for health and lifestyle choices across the lifespan. With this in mind it is essential that policymakers not only provide accessible guidelines advising on the foods and drinks that should and should not be served for breakfast but also that school breakfast providers are given evidence-based information on the importance of positive childhood breakfast habits to motivate them to correctly implement food based standards for breakfast.

The multifaceted nature of breakfast clubs, which expands beyond the provision of a breakfast meal alone was also emphasised in Study 1. Breakfast clubs were believed to provide children with a positive start to the school day beginning at home where they were more likely to co-operate with parental instruction and would leave for school in a more timely fashion on days they were attending breakfast club thus reducing stress amongst family members in the home in the morning. Breakfast clubs were therefore reported to provide some children with a more enjoyable start to the school

day than they would encounter at home on school mornings and children were subsequently reported to be happier and more alert following attendance at breakfast club. In addition, breakfast clubs were recognised as a supportive, reliable and affordable means of childcare that provided peace of mind for parents that their children would be safe in the time immediately prior to the start of the formal school day. The provision of childcare was thought to be particularly important for working parents, many of whom would have to alter shift patterns or even change jobs if breakfast clubs were not available. These findings compliment previous research reported by Shemilt et al (2003) who found that breakfast clubs help to reduce stress in the family home in the morning before school and offer reliable and affordable childcare, which supports parents who work or study. These findings warrant the attention of policymakers as there is potential for school breakfast provision to be used as part of a mechanism of support to help parents find and sustain employment. Additionally, breakfast clubs could be used as a behavioural intervention to motivate children to attend school on time.

A further advantage of breakfast clubs identified in Study 1 was the social benefits afforded to children who attend. Parents, children and school staff discussed the ways in which breakfast clubs offered opportunities for children to socialise with peers and staff that they would be unlikely to encounter at other times of the school day. It was suggested that such social opportunities are conducive to the development of positive social relationships and are particularly beneficial for children who have limited social opportunities outside of school time. Interestingly, the social situation

arising from the communal consumption of breakfast with peers was believed to be enough to encourage valuable social interaction without the need for further activities. Social interaction is key for children across all school ages for numerous reasons. It helps to encourage the development of friendships, which can in turn offer protection from peer victimisation (Hodges, Boivin, Vitaro & Bukowski, 1999) and buffer against the negative physiological effects of stressful situations (Adams, Santo & Bukowski, 2011). In addition, social interaction is thought to help children to learn social etiquette such as how to initiate activities with peers and appropriate ways of dealing with conflict (Fabes, Martin & Hanish, 2009). Again the findings of Study 1 are highly relevant to breakfast club policymakers as they demonstrate that the provision of school breakfast alone is enough to confer important socio-developmental benefits for children by offering unique opportunities for social interaction during breakfast. The findings suggest that even when space for breakfast club is limited and resources for activities are lacking, a simple communal breakfast space where children can freely interact before the start of school is highly valued.

As expected the breakfast clubs discussed in Study 1 were not without their limitations. Cost was raised a main area of concern across breakfast clubs based in the North East and North West but for different reasons. Where breakfast club attendance incurred a cost, which was the case for most clubs in the North East, there were concerns that children who would benefit most from breakfast club attendance were missing out because the cost of attending created a barrier. Even when children's attendance was supported by external funding to ensure that they could attend regardless of cost, there

was an understanding that the funding was limited, which therefore created an expectation amongst staff that once funding was no longer available supported children would be prevented from attending again thus limiting the benefit of breakfast clubs for children who need them most. Where breakfast was offered free of charge to all children in schools based in the North West of England the high cost of breakfast provision to the Local Authority was criticised as it meant that valuable financial resources were being invested in providing breakfast to all children, even if they were being given breakfast by their parents at home. However, it was evident that there was some stigma associated with the use of free school breakfast provision with parents being accused of being unable to take adequate care of their children if they had to rely on school breakfast to feed them in the mornings thus challenging the potential for schools to target breakfast provision to those families most in need. The issues surrounding the cost of breakfast clubs raised in Study 1 present a crucial area of consideration for those hoping to set up and maintain school breakfast provision. Given that breakfast clubs appear to offer a multitude of benefits to children and their families they potential provide a unique opportunity for schools to use them as a single intervention to target support to children with a variety of needs. However, careful consideration needs to be given to pricing to ensure that breakfast clubs are inclusive but also that the potential stigma associated with attendance is also addressed.

Finally, Study 1 also raised concerns regarding a lack of communication between schools and parents about what children were having for breakfast at school and when breakfast was being served; this was mainly highlighted

in the North West where all children were offered breakfast free of charge and parents felt that their main source of information had been their own children reporting back at the end of the day on what they'd had for breakfast at school in the morning. Parental involvement in health promotion strategies organised through schools is essential to their success as parents have the power to ensure that children receive consistent messages between home and school (Centers for Disease Control and Prevention, 2012) and play a key role in encouraging their children to eat healthily (Cho & Nadow, 2004). It is therefore imperative that schools and organisations leading breakfast clubs keep parents fully informed about each aspect of the provision being offered to children in an effort to maintain consistent behaviours between home and school and to allow parents opportunities to raise any concerns they might have about the provision.

Overall, the findings from Study 1 are useful as they bring to light a number of factors that should be taken into consideration when planning and implementing school breakfast clubs. However, it should be noted that the study was limited to views on breakfast club attendance in schools based in low income areas of the North East and North West of England so the findings of the investigation cannot be widely generalised. Nevertheless the findings are relevant to the implementation of aspects of the School Food Plan (Dimbleby & Vincent, 2013), which sets out targets for the creation of up to 500 new school breakfast clubs in the UK across the next two years. The new breakfast clubs will be set up in schools catering to areas of high deprivation i.e. schools with 35% or more pupils entitled to free school meals. Given that Study 1 included schools from areas where deprivation was

higher than the national average, it is possible that some of the advantages and disadvantages outlined in Study 1 will be relevant to the new breakfast clubs set up under the School Food Plan.

The findings from Study 1 were subsequently used to inform the remainder of the studies carried out within the current thesis. As discussed previously breakfast clubs were viewed by parents, children and school staff as a valuable resource with a multitude of benefits. However, a review of the literature revealed that some of the factors highlighted in Study 1, particularly social and behavioural outcomes, have received scarce attention within the research literature especially in the UK.

#### **7.4. Breakfast club attendance and children's social relationships**

Studies 2 and 3 investigated whether breakfast club attendance was associated with specific aspects of children's social relationships. In order to determine whether breakfast club attendance in particular was associated with children's relationships or whether additional time spent in school emerged as a beneficial factor children who attended after school clubs, those who attended both breakfast *and* after school clubs and children who attended no clubs were invited to participate in both studies so comparisons could be made between these groups and the breakfast club attendees group.

Study 2 looked at the quality of children's relationships with their best friends and class teachers as well as their experiences of victimisation and negative treatment of others. This study makes a unique contribution to the research literature as it is the first available study to measure the quality of children's



relationships and their experiences of receiving or subjecting others to victimisation in relation to breakfast club attendance. Moreover, the methodological challenges that emerged across the duration of the study present key considerations for future researchers wishing to investigate outcomes relating to out of school club attendance. The study initially set out to analyse data collected at three time points across a 12-month period but due to contamination caused by children switching groups between test times it was only possible to look at children's responses at two time points separated by six-months. Results presented no evidence to suggest that breakfast club attendance was associated with the quality of children's relationships with their best friends or class teachers. Similarly, breakfast club attendance made no difference to children's experiences of peer victimisation or their negative treatment of others. However, it is difficult to ascertain from Study 2 whether breakfast club attendance has no significant effect on the quality of children's relationships and experiences of victimisation or whether the results were affected by the lack of consistency in children's attendance. According to Mahoney, Parente and Zigler (2010) children might have to attend a club for one or two sessions per week for an entire year or more before benefits of attendance can be recognised. As evidenced in Study 2 of the current thesis, such consistent and prolonged attendance does not appear to be typical of the pattern of attendance at before and after school clubs in the North East of England. What is more, the frequent school holidays (i.e. one-two weeks off school around every five-eight weeks) and the long summer break (six-seven weeks every year) encountered by school children in the UK disrupt the amount of time that

they can consistently attend before and after school clubs. This brings into question whether these clubs can offer benefits across time, such as improved social relationships, beyond the surface aims of the club i.e. to provide breakfast or to teach a new skill. However, the results of Study 3 suggested that there is potential for breakfast club attendance to positively influence children's relationships in terms of social support.

Study 3 reported on children's perceptions of social support received from parents, best friends, classmates, teachers and the school community. This study makes a unique contribution to the research literature as it is the first study to investigate social support in relation to breakfast club attendance. The study also presented findings to challenge aspects of the over-scheduling hypothesis, which argues that time spent in activities outside of school time can be detrimental to various outcomes including children's relationships with their parents due to valuable time at home with family being substituted for time spent in activities (Mahoney, Harris & Eccles, 2006). Results of Study 3 showed that children who attended clubs on their school premises before and after the formal school day perceived more frequent support from their parents than children who attended no clubs therefore suggesting that time spent in organised activities might be beneficial to children's relationships with their parents rather than detrimental as popular media often portray (e.g. Levs, 2013). A potential explanation for this finding is that when parents allow or encourage their children to attend before or after school clubs they build up trust with their children and support their developing needs for independence (Eccles, 1999; Mahoney & Stattin, 2000) this might in turn lead children to perceive a higher level of support

from their parents than children who attend no clubs. Additionally, the breakfast club group also believed that they received instrumental support from the school community more frequently than children who attended no clubs but no further differences between groups were apparent for perceived frequency of support from best friends, classmates, teachers and the school community. Again these findings present some challenge to the over-scheduling hypothesis as they show that while attendance at clubs before and after school was not beneficial to the level of support that children believed they received from members of their school social network, club attendance was not detrimental either.

Various aspects of support from parents, teachers and the school community were identified as being more important to children who attended breakfast clubs, after school clubs or both breakfast *and* after school clubs than children who attended no clubs. These findings are relevant to the Person-Environment Fit theory (Eccles et al., 1993), which purports that for children to benefit from participation in an activity, the environment must meet the needs of the children involved. The finding that children place different levels of importance on different types of support according to their participation in before and after school clubs suggests that it might be useful for schools to consider the types of support that children require from different members of their social network and subsequently look at ways to involve these individuals in breakfast and after school clubs.

Despite the interesting findings that emerged from Study 3, particularly those challenging some aspects of the over-scheduling hypothesis, the study faced similar problems to Study 2 with obtaining accurate information on the

frequency and duration of children's attendance at different school clubs. As mentioned previously, Mahoney et al (2010) argued that the frequency and duration of club attendance might be a crucial aspect in determining the benefits children gain from participation in out of school clubs. So, while Study 2 and Study 3 offer a unique insight into the association between breakfast club attendance and children's social relationships, the methodological issues arising from these studies merit greater attention for various reasons. Firstly, for policymakers and schools the studies showed that record keeping on out of school provision is generally inaccurate or inaccessible and the availability of provision is intermittent. This has implications for parents particularly because research has shown that the availability of childcare is a major influential factor in a mother's decision to go out to work (Hinds & Park, 2000). A lack of available information on out of school activities and the changeable nature of such provision might discourage parents from relying on out of school clubs thus limiting their availability for work. Secondly, Studies 2 and 3 highlight difficulties for researchers who choose to investigate out of school clubs as it is evident that children's participation is sporadic and some clubs are set up on a temporary basis making longitudinal study very difficult.

#### **7.5. Breakfast club attendance, children's breakfast food choices and attitudes towards breakfast**

Given that previous research has associated lower SES with poorer breakfast habits and breakfast clubs are currently being implemented across low income areas of the UK, Study 4 investigated the potential association

between SES and children healthy and unhealthy breakfast choices and their attitudes towards breakfast in two schools where a free school breakfast scheme had recently been implemented. Differences in free school meal allocation between the two schools indicated that School 1 resided in an area of higher deprivation than School 2; a factor which has been shown to relate to children's healthy and unhealthy food choices (Tapper et al., 2008).

Analyses showed that school breakfast attendees from School 2 consumed a greater number of healthy breakfast items before the start of the school day than school breakfast attendees from School 1. No further comparisons were significant. The results lend support to previous findings, which suggest that level of deprivation might be a contributory factor to children's dietary intake (Sweeting & West, 2005; Pilgrim et al., 2012).

Correlational analysis conducted on children's attitudes to breakfast scores and their healthy and unhealthy breakfast scores revealed a negative correlation between overall unhealthy breakfast scores and attitudes to breakfast for children from School 1 who did not attend school breakfast. No further significant correlations were identified. Previous research has demonstrated a negative relationship between children's attitudes to breakfast and unhealthy breakfast food consumption (Tapper et al., 2008). However, the Theory of Planned Behaviour (Ajzen, 1985) asserts that a person's willingness to engage in a particular behaviour is driven by their perceptions of how others view the behaviour and their ability to carry out the behaviour in addition to their attitude towards the behaviour. While prior research has applied the TPB to breakfast consumption patterns, further research is required to look at the TPB in relation to breakfast club

attendance taking into consideration what children believe their parents and friends think about breakfast club attendance and how easy it is for children to access breakfast clubs.

## **7.6. Breakfast club attendance and children's behaviour**

The final study of the current thesis set out to investigate children's behaviour in breakfast club. An initial review of the literature on the relationship between breakfast club attendance and children's behaviour revealed two key methodological factors relating to research into children's behaviour that warranted attention. Firstly, it became apparent that few studies have considered the relationship between breakfast club attendance and children's behaviour and those that have relied predominantly on teacher reports of behaviour (e.g. Shemilt et al., 2004; Moore et al., 2010). Adolphus et al (2013) argued that more studies utilising observational methods are required to provide reliable data on the effects of breakfast and breakfast club attendance on children's behaviour. Additionally, consideration of the available literature on breakfast clubs showed that where observational methods had been used to investigate breakfast and children's behaviour in school, on-task behaviour (i.e. the ability to remain focussed on an activity) was used as a measure of appropriate behaviour in school (Bro et al., 1994). However, breakfast clubs present a complex environment where rules are enforced but children are allowed some free choice of activities meaning that observational criteria available in the existing research literature are not wholly relevant to the breakfast club setting. Study 5a therefore aimed to determine what behaviours are displayed by children in the breakfast club setting and whether there is any

consistency in this behaviour to allow for the development of appropriate observational criteria for use in breakfast clubs. Results of Study 5a showed that children's behaviour could be grouped into 3 positive (on-task independent, on-task social and off-task social) and 3 negative (off-task anti-social, active distraction and passive distraction) subcategories. These criteria were then used to observe children's behaviour in breakfast club sessions to determine whether children's behaviour was more positive or negative and whether the type of activity (i.e. quiet or active) made a difference to the number of positive and negative behaviours children displayed. Results showed that children displayed more positive than negative behaviours across breakfast club and the type of activity made no difference to children's behaviour. Furthermore, children's behaviour did not improve or deteriorate across the duration of the breakfast club session. These results contest the findings of Shemilt et al (2004) who reported that children's behaviour in breakfast clubs can be boisterous. However, the consistent routines and staff supervision evident across the breakfast clubs observed in Study 5 might have positively influenced children's behaviour unlike in some of the breakfast clubs investigated by Shemilt et al where supervision was thought to be inadequate and boisterous behaviour was allowed.

Study 5 offers a unique contribution to the research literature as it is the first to observe and report on the behaviours that children display within breakfast club. What is more, no previous studies have looked at the activities that children participate in during breakfast club and attempted to investigate how these activities might influence behaviour. The findings of the study may be

useful to schools as they suggest that when routines are consistent and supervision is adequate both active and quiet activities can be incorporated into breakfast club sessions without detriment to children's behaviour. Additionally, the findings provide a set of observational criteria for researchers hoping to investigate children's behaviour within breakfast clubs and offer a starting point for further study of how the behaviours children display in breakfast club might carry over into the classroom at the start of the school day. Unfortunately, a limitation of Study 5 is that it was not possible to film children's behaviour within classes following their attendance at breakfast club so it cannot be determined whether breakfast club attendance is associated with subsequent classroom behaviour as previous research has suggested (Shemilt et al., 2004).

### **7.7. Methodological considerations and directions for future research**

One of the major drawbacks of the studies presented in the current thesis was a lack of availability of information beyond that collected from children. First of all, where an opt out method of consent was adopted, schools were asked to provide children's dates of birth to allow calculation of exact ages as this information was not obtainable from parents. While some schools were willing to provide children's dates of birth, other schools suggested that they were unable to do so as they would breach data protection guidelines by disclosing such information. In order to provide as much information on participants as possible throughout the current thesis children's ages or year groups were detailed in studies where mean ages could not be calculated. While this is not the most accurate method of reporting children's ages, it is a



convention that has been adopted in prior studies available in the research literature (e.g. Cooper, Valentine, Nye & Lindsay, 1999).

An effort was also made to obtain information on the amount of time that children spent in breakfast and after school clubs each week and the duration of their attendance across time but some schools were unwilling or unable to provide such information. Future studies should look at ways to obtain school club attendance data as there are currently no available guidelines on how often and for how long children should attend breakfast and after school clubs before benefits are perceptible. Study 4 of the current thesis showed that online questionnaires are an unobtrusive way of collecting data from a large number of pupils across different schools as a researcher is not required to be present on site to collect data at a specific time and therefore data collection does not interfere too much with the normal school day. Given that the use of technology is widely encouraged in schools (e.g. Department for Education, 2013) online questionnaires might be a good method of collecting data on children's school club participation without disrupting daily school routines.

Furthermore, in relation to children's out of school club participation, it would be useful to investigate reasons for non-participation and dropping out in order to inform future development of out of school club provision and evaluation. As discussed previously it has been suggested that more longitudinal investigations and randomised controlled trials are needed to reliably evaluate the long term impact of children's participation in breakfast and after school clubs (The Scottish Executive, 2003). However, findings from the current thesis supported previous studies, which have shown that

such investigations are prone to high levels of contamination across treatment arms making longitudinal analysis difficult (e.g. Shemilt et al., 2004). Investigation of children's patterns of out of school club attendance would allow researchers to look at viable timescales for longitudinal evaluation and to consider factors that might influence children's attendance from the early planning stages of the investigation.

Finally, data within the current thesis were collected from primary school children only. Given that the prevalence of breakfast skipping and poor breakfast food intake has been found to increase with age (Rampersaud, 2009) it would be interesting to examine the impact of breakfast club attendance on the breakfast habits of adolescents in the UK as research of this nature has not been carried out. Moreover, it would be fruitful to investigate adolescent engagement in breakfast clubs, particularly because increasing age brings increased independence thus it is likely that adolescents have more choice than primary school children about whether or not to attend breakfast club. A future study, similar to Study 1 of the current thesis, looking at secondary school pupils' views on breakfast clubs would therefore offer a useful contribution to the literature on UK-based breakfast clubs.

## **7.8 Conclusions**

The series of studies presented throughout the current thesis offer a useful and unique contribution to the research literature on school breakfast provision and out of school clubs in general. Overall, the results showed that there are a multitude of perceived benefits and drawbacks associated with

breakfast club attendance (Study 1, Chapter 2) but quantitative investigation of outcomes across time is complex owing to children's variable attendance at school clubs and a lack of available information on children's school club attendance (Study 2, Chapter 3). Results of cross-sectional analysis on children's perceptions of social support suggest that attendance at school clubs may be beneficial, particularly with regards to the support that children perceive from their parents thus offering some challenge to the over-scheduling hypothesis (Study 3, Chapter 4). In terms of children's breakfast habits, Study 4 showed support for the existence of a relationship between SES and children's healthy breakfast intake, though this was only the case for children who attended school breakfast. More research is needed to properly identify what a healthy breakfast should consist of and to what extent school breakfast provision meets such criteria in areas of differing SES, particularly because Study 1 of the current thesis showed that foods served within school breakfast clubs do not always adhere to school food guidelines and have the potential to impact negatively on children's weight and oral health. Finally, behavioural observation showed that children's behaviour within a well-supervised breakfast club environment is generally positive regardless of the type of activity children are engaged in.

In sum, the mixed pattern of results outlined throughout the current thesis present a unique and timely contribution to the research literature on breakfast clubs. Given plans to expand breakfast clubs within the UK, the current thesis highlights key areas for consideration by policymakers and schools that could be beneficial to the implementation and on-going development of breakfast clubs. Moreover, the methodological challenges

outlined across each study provide a useful guide to researchers planning to investigate outcomes associated with breakfast club attendance.

## APPENDICES

### Appendix Ai: Example cover letter for parents.



Dear Parent/Carer,

Thank you for your interest in taking part in the school breakfast research that is currently taking place at your child's school.

Taking part in this project involves you coming into your child's school to join in a discussion with a researcher about school breakfast. Further information about the project is attached. If you require any more details, please contact me via email [pamela.l.graham@northumbria.ac.uk]. Alternatively, you can let your child's school know that you have a question and leave a contact number at the school office and I will contact you to answer any questions you have.

Please complete the attached form and return it to your child's school by [date] so that further arrangements can be made for you to come into school to take part in the project at a suitable time.

Thank you for taking the time to consider this information. Any help you can offer with this project would be greatly appreciated.

Kind regards,

Pamela Graham

Postgraduate Researcher

## **Appendix Aii: Example information for parents.**

### Information for Parents

**Project Title:** School breakfast clubs: The views of parents, pupils and school staff

**Researchers:** Pamela Graham [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)] and Dr. Greta Defeyter [[greta.defeyter@northumbria.ac.uk](mailto:greta.defeyter@northumbria.ac.uk)]

#### **What is this project all about?**

Many schools in the UK now provide breakfast to children before the start of the school day. However, very little is known about what parents, children and school staff think about school breakfast and how it is used in different schools so the aim of this project is to find out about these things by asking parents, children and staff.

#### **What will I be asked to do?**

If you would like to take part in this project you will be asked to come into your child's school to join in a discussion with a researcher about school breakfast.

The discussion will involve talking about things like what you think the best things are about school breakfast and what could be done to improve it. You will also be asked to complete a short questionnaire to give details like whether you are male or female and your age group and some brief details about your child's attendance at school breakfast. If you are asked any questions that you do not want to answer, this is fine; you will not be expected to answer anything you don't want to. Also, if you arrive to take part but change your mind, you are free to leave at any time.

All discussions will be recorded so that they can be written out in full after the discussions have taken place. Key points from the discussions will be brought together and summarised to give a general view of school breakfast from parents, children and school staff.

#### **When will the discussions take place?**

An appropriate time will be organised with each parent for them to come in and take part in the discussion. This is likely to be some time during the school day.

Taking part in this project is likely to take around 20-30 minutes.

#### **What will happen to the information I provide?**

Any information collected during the project will be stored in accordance with the Data Protection Act and will only be used for the purpose of this project. All information will be coded with unique participant numbers and any names will be removed.

## **Appendix Aii (continued): Example information for parents.**

All recordings taken during the discussions will be stored in a locked cabinet in a secure office within Northumbria University and will only be accessed by the team working on this project.

The information collected will be summarised and written up as part of a PhD thesis. The information might also be used in publications and presentations about the project but you will never be identified individually in any reports or presentations.

### **Has this project received appropriate clearance?**

This project has been approved by the Faculty of Health and Life Sciences Ethics Committee at Northumbria University and your child's head teacher has given consent for the project to take place on school premises. Pamela Graham is in possession of an up to date Enhanced Disclosure that allows her to work in schools.

### **How can I find out more?**

For more information please contact Pamela Graham via email: [pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk) or leave your name and contact number at your child's school office and you will be contacted to allow you to ask any questions.

### Appendix Aiii: Example consent form for parents.

**Project Title:** School breakfast clubs: The views of parents, pupils and school staff

**Participant Number:** \_\_\_\_\_

Please confirm that you agree with the following sentences by ticking the boxes next to each sentence:

I have read and fully understood all the information provided about the project	
I understand that my voice will be recorded during the group discussion so that key themes from the discussion can be picked out by the research team	
I understand that information collected from the recordings might be used in presentations and publications about the project but the actual recordings will be stored securely and will only be accessed by the research team	

\*Please delete as appropriate

I **\*would / would not** like to take part in this project.

I **\*would / would not** like to receive a summary of the project findings.

Name: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

If you would like to take part in this project please provide the following information.  
The information will be used to make arrangements for you to take part.

Contact details and best time to get in touch:

.....  
.....Which days are  
you likely to be available to take part in this project (please circle all that apply)

Monday

Tuesday

Wednesday

Thursday

Friday



**Appendix Aiv: Example consent form for children.**

I would really like to find out about what children and young people think about their school breakfast.



If you would like to help me with this, you will be invited to come along and tell me all about school breakfast. We will talk about things like...



To make sure I remember everything that people talk about, everyone will be recorded. This is nothing to worry about though, only the people working on this project will get to listen to the recordings.

**Appendix Aiv (continued): Example consent form for children.**

Also, if you come along to talk about school breakfast but then you change your mind, you can leave at any time because it's up to you whether you join in or not.

Please write your name below and circle yes or no to show whether or not you would like to join in with this project.

Name:.....

YearGroup:.....

Would you like to come along and talk about school breakfast?

Yes

No

If you circled yes, does this mean that you are happy to have your voice recorded while you talk about school breakfast?

Yes

No



If you circled yes, you must take a form home to ask whoever you live with whether it is ok for you to join in this project.

## Appendix Av: Example parental cover letter for children's participation.



Dear

Parent/Guardian,

I am currently working on a project with your child's school, which aims to find out what children think about school breakfast.

As your child has shown an interest in taking part in the project I am writing to give you some information about what they will be asked to do if you are happy for them to take part and how you can get in touch if you have any questions about the project.

Taking part in this project requires your child to join in a discussion with a researcher and other children from their school about school breakfast. Your child will be allowed to talk freely about what they think about school breakfast but the researcher will also ask questions to guide the conversation, such as 'what is your favourite part of school breakfast?' and 'How could school breakfast be made even better?' However, your child would not have to answer any questions that they didn't want to answer and they would be free to leave the discussion and go back to class at any time if they changed their mind about taking part.

Further information about the project is attached. If you require any more details, please contact me via email [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)]. Alternatively, you can let your child's school know that you have a question and leave a contact number at the school office and I will contact you to answer any questions you have.

Your child's head teacher has given permission for the project to take place at school but your consent is also needed before your child will be able to join in the project. Please complete the attached consent form to state whether or not you would like your child to take part in the project. Completed forms should be returned to your child's school by [date].

Thank you for taking the time to consider this information. Any help your child can offer with this project would be greatly appreciated.

Kind regards,

Pamela Graham

## **Appendix Avi: Example parental information form for children's participation.**

### Information for Parents

**Project Title:** School breakfast clubs: The views of parents, pupils and school staff

**Researchers:** Pamela Graham [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)] and Dr Greta Defeyter [[greta.defeyter@northumbria.ac.uk](mailto:greta.defeyter@northumbria.ac.uk)]

#### **What is this project all about?**

Many schools in the UK now provide breakfast to children before the start of the school day. However, very little is known about what parents, children and school staff think about school breakfast and how it is used in different schools so the aim of this project is to find out about these things by asking parents, children and staff.

#### **What will my child be asked to do?**

If your child would like to take part, they will be asked to join in a discussion with a researcher and other children from their school about school breakfast. Children will discuss things like what their favourite part of school breakfast is and what could be done to improve it. Your child will not be expected to answer anything that they don't want to answer and will be free to go back to their class if they change their mind about joining in.

All discussions will be recorded so that they can be written out in full after the discussions have taken place. Key points from the discussions will be brought together and summarised to give a general view of school breakfast from parents, children and school staff.

#### **When will the discussions take place?**

Children will be invited join in a discussion throughout the school day at an appropriate time arranged with school staff.

#### **What will happen to the information provided by my child?**

Any information collected during the project will be stored in accordance with the Data Protection Act and will only be used for the purpose of this project. All information will be coded with unique participant numbers and any names will be removed.

All recordings taken during the discussions will be stored in a locked cabinet in a secure office within Northumbria University and will only be accessed by the team working on this project.

The information collected will be summarised and written up as part of a PhD thesis. The information might also be used in publications and

## **Appendix Avi (continued): Example parental information for children's participation.**

presentations about the project but your child will never be identified individually in any reports or presentations.

### **Has this project received appropriate clearance?**

This project has been approved by the Faculty of Health and Life Sciences Ethics Committee at Northumbria University and your child's head teacher has given consent for the project to take place on school premises. Pamela Graham and Dr Defeyter are in possession of an up to date Enhanced Disclosures that allows them to work in schools.

### **How can I find out more?**

For more information please contact Pamela Graham via email: [pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk) or leave your name and contact number at your child's school office and you will be contacted to allow you to ask any questions.

**Appendix Avii: Example parental consent form for children's participation.**

**Consent for Your Child**

Participant Number: \_\_\_\_\_

Child's first name: \_\_\_\_\_ Child's surname: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Class: \_\_\_\_\_

Please confirm that you agree with the following sentences by ticking the boxes next to each sentence:

I have read and fully understood all the information provided about the project	
I understand that children's voices will be recorded during discussions so that key themes from the discussions can be picked out by the research team	
I understand that information collected from the recordings might be used in presentations and publications about the project but the actual recordings will be stored securely and will only be accessed by the research team	

\*Please delete as appropriate

I **\*would / would not** like my child to take part in this project.

I **\*would / would not** like to receive a summary of the project findings.

Name: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix Aviii: Example cover letter for school staff.



Dear Teacher,

Thank you for your interest in taking part in the school breakfast project that is currently taking place at your school. The project aims to find out the views of parents, pupils and school staff on school breakfast.

Participation in the project involves joining in a one to one discussion about school breakfast with a researcher. All discussions will be recorded to allow them to be transcribed and summarised for this project.

Further information about the project is attached. If you require any more details, please don't hesitate to contact me via email [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)].

After reading the attached information, please complete the attached form so that further arrangements can be made to allow you to take part in the project at a convenient time. Completed forms should be returned to your school office by [date].

Any help you can offer would be greatly appreciated.

Kind regards,

Pamela Graham

Postgraduate Researcher

## **Appendix Aix: Example information for school staff.**

### Information for School Staff

**Project Title:** School breakfast clubs: The views of parents, children and school staff

**Researchers:** Pamela Graham [pamela.l.graham@northumbria.ac.uk] and Dr Greta Defeyter [greta.defeyter@northumbria.ac.uk]

#### **What is this project all about?**

Many schools in the UK now provide breakfast to children before the start of the school day. However, very little is known about what parents, children and school staff think about school breakfast and how they are used in different schools so the aim of this project is to find out about these things by asking parents, children and staff.

#### **What will I be asked to do?**

If you would like to take part in this project you will be asked to engage in a discussion about school breakfast with a researcher who will come into school at a time most convenient to you to allow you to participate in the project.

You will be invited to discuss things like the advantages and disadvantages of school breakfast. You will also be asked to complete a short questionnaire to give details like whether you are male or female and your responsibility within the school as well as some brief details about any involvement you have with your school breakfast. If you are asked any questions that you do not want to answer, this is fine; you will not be expected to answer anything you don't want to. Also, if you arrive to take part but change your mind, you are free to leave the discussion at any time.

All discussions will be recorded so that they can be written out in full after the discussions have taken place. Key points from the discussions will be brought together and summarised to give a general view of school breakfast from parents, children and school staff.

#### **When will the discussions take place?**

An appropriate time will be organised with each individual staff member who would like to take part in the project.

Taking part is likely to take around 20-30 minutes.

#### **What will happen to the information I provide?**

Any information collected during the project will be stored in accordance with the Data Protection Act and will only be used for the purpose of this project. All information will be coded with unique participant numbers and any names will be removed.



## **Appendix Aix (continued): Example information for school staff.**

The recordings taken during the discussion sessions will be stored in a locked cabinet in a secure office within Northumbria University and will only be accessed by the team working on this project.

The information collected will be summarised and will be written up to contribute towards a report to be submitted to Blackpool Council. The information might also be used in publications and presentations about the project but you will never be identified individually in any reports or presentations.

### **Has this project received appropriate clearance?**

This project has been approved by the Faculty of Health and Life Sciences Ethics Committee at Northumbria University and your school's head teacher has given consent for the project to take place on school premises. Pamela Graham is in possession of an up to date Enhanced Disclosure that allows her to work in schools.

### **How can I find out more?**

For more information please contact Pamela Graham or Dr Defeyter via email: [pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk); [greta.defeyter@northumbria.ac.uk](mailto:greta.defeyter@northumbria.ac.uk)

## Appendix Ax: Example consent form for school staff.

### Consent Form for School Staff

**Project Title:** School breakfast clubs: The views of parents, children and school staff

**Participant Number:** \_\_\_\_\_

I have read and fully understood all the information provided about the project	
I understand that my voice will be recorded during discussions so that key themes from the discussions can be picked out by the research team	
I understand that information collected from the recordings might be used in presentations and publications about the project but the actual recordings will be stored securely and will only be accessed by the research team	

\*Please delete as appropriate

I **\*would / would not** like to take part in this project.

I **\*would / would not** like to receive a summary of the project findings.

Name: \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

If you would like to take part, please specify some days and times throughout the school week that you are likely to be available to take part:

.....  
.....  
.....

**Appendix Bi: Demographic questionnaire for parents in Study 1.**

## **Questionnaire for Parents**

The following questions ask you to provide some information about yourself and some details about your child's participation in school breakfast.

If there are any questions that you are not sure about, please ask for help.

If there are any questions that you would prefer not to answer, please draw a line through the question number and leave the question out.

Any information you provide will only be used for the purpose of this research project.

Participant Number: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix Bi (continued): Demographic questionnaire for parents in Study 1.

### About You

Please circle one response for each question.

1. Are you:                      Male                      or                      Female
  
2. Are you aged:              less than 18 years                      18-25 years  
    26-35 years                                      Above 35 years
  
3. Are you:                      White British                                      White Irish  
    Asian/Asian British                                      Mixed ethnicity  
    Black/African/Caribbean/Black British  
    Other (please  
    specify):.....
  
4. Are you:                      Single                                      Married  
    Civil partnership                                      Separated  
    Divorced                                      Widowed  
    Living with a partner  
    In a relationship but living apart
  
5. Are you:                      In full time education                      Self employed  
    In part time education                      Unemployed  
    In full time employment                      Other (please  
    In part time employment                      specify):.....  
    Self-employed                                      .....  
    Unemployed                                      .....

**Appendix Bi (continued): Demographic questionnaire for parents in Study 1.**

**About Your Child/Children**

Please complete the table below to give some information about your children. Please include all children who currently live with you.

Child's age	Child's sex	Does this child currently attend this school?	Does this child currently attend school breakfast?	How long has this child attended school breakfast?	How many days per week does this child attend school breakfast?	What is the main reason for this child's attendance at school breakfast?

**Appendix Bi (continued): Demographic questionnaire for  
parents in Study 1.**

If there are any further comments that you would like to make about school breakfast that you did not mention during the group discussion, please note them here...

**Thank you for taking the time to take part in this  
project**

**Appendix Bii: Demographic questionnaire for school staff in Study 1.**

## **Questionnaire for Teachers**

The following questions ask you to provide some brief information about yourself and your involvement in school breakfast.

If there are any questions that you are unsure about, please ask for help.

If there are any questions that you would prefer not to answer, please draw a line through the question number and leave the question out.

Any information you provide will only be used for the purpose of this research project.

Participant Number: \_\_\_\_\_

Date: \_\_\_\_\_

**Appendix Bii (continued): Demographic questionnaire for  
school staff in Study 1.**

**About You**

**Please circle one response for each of the first two questions then write  
your response to the remaining questions.**

1. Are you:                      Male                      or                      Female

2. Are you aged:              less than 18 years                      18-25 years  
   26-35 years                      Above 35 years

3. What are your current responsibilities within school?

Please specify:

.....

4. Approximately how long have you been working within education  
including NQT year if applicable?

Please specify:

.....

5. Please describe your current or prior involvement in school  
breakfast, including your own children attending if applicable:

.....

.....

.....

.....

6. How many children from your class currently attend school  
breakfast?

Please specify:

.....



**Appendix Bii (continued): Demographic questionnaire for  
school staff in Study 1.**

If there are any further comments that you would like to make about school breakfast that you did not mention during the discussion, please note them here...

**Thank you for taking the time to take part in this  
project**

## **Appendix Ci: Interview schedule for parents in Study 1.**

### **School Breakfast: What Do Parents Think?**

1. Tell me about your child's attendance at school breakfast:
  - How often does your child attend?
  - What do they do there?
  - What are the main reasons for your child attending school breakfast?
2. What difference does school breakfast make to your morning routine?
3. What does your child gain from attending school breakfast?
4. Have any issues arisen with your child relating to their school breakfast attendance?
5. What are the positive aspects of school breakfast?
6. What could be done to improve school breakfast?
7. How would things change for you and your child if school breakfast closed down?
8. There have been suggestions in the media that parents should provide breakfast to their children each day and this responsibility should not be put onto schools – what do you think about this?

End- Is there anything else that you'd like to mention about breakfast clubs that we haven't talked about already?

## **Appendix Cii: Interview schedule for children in Study 1.**

### **School Breakfast: What Do Children Think?**

1. Tell me about your school breakfast - What kind of things do you do there?
2. Why do you go to school breakfast?
3. What do you do on the mornings that you don't go to school breakfast?
4. Does going to school breakfast make any difference to:
  - How you feel in the morning?
  - What you have for breakfast?
  - How you feel about coming to school?
  - How you behave in class?
  - How you get on with other people in your school?
5. What is your favourite part of school breakfast?
6. What could be done to make school breakfast even better?
7. What would happen if school breakfast closed down so you couldn't come anymore?
  - how would you feel about it?
  - what would you do in the mornings before school?

End- Is there anything else that you'd like to mention about breakfast clubs that we haven't talked about already?

## **Appendix Ciii: Interview schedule for school staff in Study 1**

### **School Breakfast: What do school staff think?**

1. Tell me about your school breakfast - What do children do there?
2. What do you think the reasons are for children attending school breakfast?
3. What difference do you think school breakfast makes to the children who attend?
4. What difference do you think school breakfast makes to parents?
5. What difference do you think school breakfast makes to the school and the staff?
6. There have been suggestions in the media that parents should provide breakfast to their children each day and this responsibility should not be put onto schools – what do you think about this?
7. What are the positive aspects of school breakfast?
8. What could be done to improve school breakfast?
9. What impact would it have if school breakfast closed down

For the school?

For pupils?

For the staff?

For parents?

End- Is there anything else that you'd like to mention about breakfast clubs that we haven't talked about already?

## Appendix Di: Example debrief for parents



Participant Number:

Dear Parent/Guardian,

We would like to take this opportunity to thank you for taking part in this project; your contribution is invaluable in helping us to understand parents' views about school breakfast.

Although breakfast is available in many schools, very little is known about why children attend school breakfast and how it makes a difference to families and schools. The aim of this project was to try to gain some understanding of the importance of school breakfast by asking parents, children and school staff for their views.

The information provided by parents will be summarised and included in a PhD thesis. The overall project findings might also be shared with others through presentations and publications relating to the project. However, your individual information will not be identifiable through any of these project summaries.

On completion of the project, your child's school will be sent a summary of the research findings. You will also receive a summary of the research findings if you requested a summary at your interview session.

If for any reason you would like to withdraw your contribution to this project, please contact Pamela Graham via email [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)] within one month of taking part, quoting the participant number given above. Furthermore, if you have any concerns or complaints about the way in which this research has been conducted you can contact the Chair of the School Ethics Committee, Dr. Nick Neave via email [nick.neave@northumbria.ac.uk](mailto:nick.neave@northumbria.ac.uk).

Many thanks again for all your help with this project.

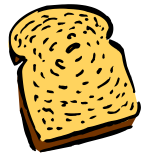
Kind regards,

Pamela Graham

### Appendix Dii: Example debrief for children



Lots of schools now have school breakfast, but people who don't work in schools don't know much about it.



By coming along and having a chat with some other children from your school you have helped me learn lots about your school breakfast.

I think all the things you've talked about are really important so I'm now going to tell other people about all your great ideas so they will know what's going on at school breakfast. But don't worry, I'll listen to the recordings and write down what everyone said without putting your names on it so no one will know which bits you said and no one else will hear your voice on the recording.



Once I've finished finding out about school breakfast in different schools I will let your school know all the things I've found out so you can find out too. But, just like before, your name won't be on any of the information I send to your school so no one will be able to find out which bits you said.



Thanks for all your help with this important project. You did a great job!

Don't forget, if you have any questions about the project you can ask them now.



## Appendix Diii: Example debrief for parents following children's participation



Participant Number:

Dear Parent/Guardian,

I would like to take this opportunity to thank you for allowing your child to take part in the breakfast clubs research project that recently took place at their school; your child's contribution is invaluable in helping us to understand children's views about school breakfast clubs.

Although breakfast clubs are available in many schools, very little is known about why children attend breakfast clubs and how they make a difference to families and the schools that run them. The aim of this project was to try to gain some understanding of the importance of breakfast clubs in schools by asking parents, children and school staff for their views.

The information provided by children will be summarised and written up to contribute towards a PhD thesis. The overall project findings might also be shared with others through presentations and publications relating to the project. However, your child's individual information will not be identifiable through these project summaries.

On completion of the project, your child's school will be sent a summary of the research findings. You will also receive a summary of the research findings if you requested a summary when you gave permission for your child to take part.

If for any reason you would like to withdraw your child's contribution to this project, please contact Pamela Graham via email [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)] within one month, quoting the participant number given above. Furthermore, if you have any concerns or complaints about the way in which this research has been conducted you can contact the Chair of the School Ethics Committee, Dr. Nick Neave via email [nick.neave@northumbria.ac.uk](mailto:nick.neave@northumbria.ac.uk).

Many thanks again for allowing your child to help with this project.

Best wishes,

Pamela Graham

## Appendix Div: Example debrief for school staff



Participant Number:

Dear Staff Member,

We would like to take this opportunity to thank you for taking part in this project; your contribution is invaluable in helping us to understand staff views about school breakfast.

Although breakfast is available in many schools, very little is known about why children attend school breakfast and how it makes a difference to families and schools. The aim of this project was to try to gain some understanding of the importance of breakfast in schools by asking parents, children and school staff for their views.

The information provided by school staff will be summarised and written up to contribute towards a PhD thesis. The overall project findings might also be shared with others through presentations and publications relating to the project. However, your individual information will not be identifiable through these project summaries.

On completion of the project, your school will receive a summary of the research findings. You will also receive a summary of the research findings if you requested a summary at the discussion session.

If for any reason you would like to withdraw your contribution to this project, please contact Pamela Graham via email [[pamela.l.graham@northumbria.ac.uk](mailto:pamela.l.graham@northumbria.ac.uk)] within one month of taking part, quoting the participant number given above. Furthermore, if you have any concerns or complaints about the way in which this research has been conducted you can contact the Chair of the School Ethics Committee, Dr. Nick Neave via email [nick.neave@northumbria.ac.uk](mailto:nick.neave@northumbria.ac.uk).

Many thanks again for all your help with this project.

Best wishes,

Pamela Graham



## **Appendix Ei: Example transcript from Study 1a: Parent**

**Interviewer:** Alright then to start with can you tell me about your child's attendance at breakfast club?

**P9:** They attend every day. I've got three children and they've been coming to breakfast club now for... even... they've come to this school for about a year and a half but even in their old school they went to breakfast club erm it's just easier them coming but they enjoy coming as well

**Interviewer:** What kind of things do they do at the breakfast club?

**P9:** Depending what time we get here erm my three usually set the toys out on a morning and help out with that erm but then they'll like have their breakfast and they'll get to play with different kids that they don't play with at home and older like different ages as well you know like when they're out on the playground they always seem to stick together but in here not all their friends come so they play with them all, which is quite good isn't it, it's nice to see you see the bigger ones helping the little ones as well

**Interviewer:** Erm what are the main reasons for your children coming to breakfast club?

**P9:** I help out at breakfast club so erm it's just they wanted to come, the first time they were like 'oh can we go to breakfast club?' they wanted to go themselves and it wasn't run by any parents and then they wanted parents to help so I volunteered. I do a Monday, Wednesday and Friday's so I might as well bring them on Tuesday's and Thursday's as well

**Interviewer:** Right, brilliant. Does their attendance vary at all across the school year, their breakfast club attendance?

**P9:** No

**Interviewer:** Just consistent then

**P9:** Yeah. I like it er cos I don't like them being off school they get 100% attendance they might as well be at breakfast club

**Interviewer:** Erm what difference do you think the breakfast club makes to your morning routine?

**P9:** It's less rushed erm we all we get up at seven I only live over the road so when I get the kids here it gets me started for the day but it also gives

them enough time to wake up properly you know so I'm getting them up earlier but I know they're getting breakfast, toast, cereal and a drink [unclear] so the brain starts working earlier, they're up and about and by the time they're in school they've been awake nearing on two hours so and then for me it's easy cos I come here, help out in breakfast club, go home and I'll do my own work do you know clean my own house and then there's less mess on a morning for breakfast pots as well, I've just got all these to clean up but there's less mess at home

**Interviewer:** Brilliant. Does it make any difference to what they have for their breakfast?

**P9:** Erm yeah cos they have toast here where at home they just have cereal, they wouldn't have toast. Variety wise, obviously I don't have fifteen different varieties of cereal but I usually do have about five or six different boxes of cereal in the house for them to choose from but they do have toast so just mainly the toast what they have

**Interviewer:** Okay. Does it make any difference to how they feel about coming to school in the morning?

**P9:** I don't know I've never asked them really, it's something I've never... there is days where they go 'oh I don't wanna go to breakfast club' but I think it's cos they're more tired and they know we have to set off earlier but erm so when my husband's at home I'll say so and so doesn't want to go to breakfast club, they'll stay at home and he'll bring them over to school cos obviously I've gotta be here anyway to help out but erm I've never really asked them, I might ask them that tonight when they're at home

**Interviewer:** Do you think it makes any difference them coming into school earlier do you think they are gonna be more tired or do you think it's one of them things that by the time they come in they're alright

**P9:** Well no cos they do, they get up between seven and quarter past so they're up and awake. Erm some days they love coming in do you know cos they'll get to set the toys out, get to take the milk to nursery and just no I don't think it affects them coming in any earlier cos in their old school they used to start school at half eight so we were leaving the house at about quarter to eight anyway so to get to school, they're used to, they're used to being up early

**Interviewer:** And do you think it makes any difference to their behaviour in the morning coming to breakfast club?

**P9:** Erm it makes them get ready a lot quicker erm and they get up and it's like they know they have to make their beds and everything where if we were just at home they'd be like 'I don't want to get up' and then it's like it just seemed to be a mad rush when we're at home, having breakfast to come to school [unclear] coming to breakfast club, yeah I'd say it does change them slightly cos they do get up and it's like right kids come on we've gotta be at breakfast... especially Monday, Wednesday and Friday when I'm helping out it's like mum's gotta be at breakfast club for eight o'clock come on and we make it for eight o'clock you know and some days I've seen me here for twenty to eight and set everything up but yeah I'd say it definitely is... not massively in their behaviour but it does, it does do something, compared to on a weekend

**Interviewer:** Brilliant. You've mentioned some of these already but what do you think the children gain from attending breakfast club?

**P9:** Like I say to interact with other different kids and a bit of responsibility as well you see because they help out do you know they set the toys up, take the milk down, the teachers will ask them to do different stuff, they do gain bits of responsibility, I don't know, I think it does get them started ready for the day, like I say by the time the school starts they've been up two hours some kids you see them walking to school and they're asleep you know so I think it just helps them to start the day

**Interviewer:** Great. Have any issues arisen with any of your children relating to their breakfast club attendance?

**P9:** No, no, never

**Interviewer:** Right, what are the positive aspects of the breakfast club?

**P9:** It sounds bad but you know some kids are getting breakfast do you know every kid that gets in here they get a bowl of cereal, toast and a drink and you'd like to think they've all got cereal at home but some kids get 'oh quick we've slept in' and they're rushed cos we have had it in here do you know kids 'we've had no breakfast' so they get breakfast but then you know every kid that walks through here fifty, sixty, seventy kids have had breakfast and they all get to interact with each other the big ones in there are helping the little ones colour in, draw do you know and it gets them used to being up early especially when my oldest one starts senior school next year, he'll be setting off to walk to school for eight o'clock so he'll have to be up so cos he's getting up at seven he knows [unclear] I've gotta get my breakfast [unclear] so it helps him that way as well

**Interviewer:** Erm what could be done to improve the breakfast club?

**P9:** Erm in what way? Like our breakfast club alone?

**Interviewer:** If you've got knowledge of other breakfast clubs you can mention those as well but if there's anything in particular about his one

**P9:** Like I say my other children used to go to another breakfast club and that was very well run like I think this is quite well run, the amount of kids, there's some breakfast clubs that some of the mum's I've spoke to 'oh my kid goes to breakfast club', there's like twenty kids, this is quite a popular breakfast... and it's getting more and more and I think it's run quite... and there's only three of us usually behind the counter like one on cereal, one on toast and washing up and then you've got a few outside but it runs quite smoothly but erm they used to do like hot chocolates, they weren't hot they were warm, but the kids enjoyed them especially I think that would take off again in the winter months cos I give my kids it more in the winter months just cos I hate the thought of them being cold but no I think it's very well run I don't think there's much could be changed about it really cos it is a really good breakfast club do you know and it's free so no I think it's good

**Interviewer:** How would things change for you and your children if the breakfast club was to close?

**P9:** I'd be lost on a morning what to do only giving three kids breakfast instead of seventy erm it wouldn't greatly affect me erm cos I don't work on a morning I only work on an afternoon and evening so it wouldn't greatly affect me personally but I know there's some mum's rely on it cos they go to work on a morning but erm I think it would the kids as well I think it would affect the kids if it closed cos then I think it would be a bit like what do we do with like our morning really cos every day it has helped them sort things out to go to breakfast club i.e. get up and ready so I think they'd be a bit like 'oh we can just chill this morning' but we've still gotta get to school I think it would make them that little bit lasier probably

**Interviewer:** Erm last thing I want to cover is there've been suggestions in the media recently that parents should be the ones giving breakfast to their children at home and the responsibility shouldn't be put onto schools. What do you think about that?

**P9:** Yeah parents should be given the responsibility but like I said earlier on not all kids get breakfast, at least this way, and it's not the school ours is funded you know so it's not coming from the school so, but I think it's

wrong. Kids get breakfast at home but a lot of kids, it's more popular for kids to go to breakfast club but as I say you know them kids that walk through that door are getting something but yeah I think they just need to give their kids breakfast at home cos they're out early on a morning, do they give their kids breakfast or do they have their servants, nannies, whatever giving their kids breakfast, no, no I think breakfast clubs are a good idea

**Interviewer:** Brilliant. Is there anything else that you want to mention about breakfast clubs that we haven't covered already?

**P9:** No not that I can think of no

**Interviewer:** That's brilliant, thanks.

### **Appendix Eii: Example transcript from Study 1a: Children**

**Facilitator:** Right then who would like to start and tell me about your breakfast club?

**K:** Erm you have your breakfast

**Facilitator:** You have your breakfast? What kind of things do you have for breakfast here?

**K:** Golden balls

**Facilitator:** Golden balls. And what do you have to drink?

**K:** Milk

**Facilitator:** And do you like the breakfast here?

**K:** [nods head]

**Facilitator:** You do? And what about M? What can you tell me about your breakfast club?

**M:** [no response]

**Facilitator:** What kind of things do you do when you're here?

**M:** I play with my friends

**Facilitator:** What kind of things do you play?

**M:** We play... we play with something, we slide it across the floor

**Facilitator:** Right, that sounds good. And what do you have for your breakfast when you're here?

**M:** I have them all

**Facilitator:** What do you have?

**M:** I have golden balls and chocolate balls

**Facilitator:** Golden balls and chocolate balls...

**M:** And toast

**Facilitator:** And toast? And what do you have to drink?

**M:** Apple juice

**Facilitator:** You have apple juice? Lovely. S, what can you tell me about the breakfast club?

**S:** I like playing with the parachute

**Facilitator:** Playing with the parachute? Right, and what do you have for your breakfast when you're here?

**S:** Golden balls

**Facilitator:** Golden balls? Is that everyone's favourite breakfast? And what do you have to drink?

**S:** Apple juice

**Facilitator:** You have apple juice. And do you all like the breakfast here?

[S and M nod head]

**Facilitator:** You do? And K do you like the breakfast here?

**K:** [nods head]

**Facilitator:** And why do you come to the breakfast club?

**K:** To get some food

**Facilitator:** To get some food?

**M:** My mam doesn't let me have breakfast at home, it's only when [sibling 1] goes to [camp] or [sibling 2] goes to camp

**Facilitator:** Right. So you come to breakfast club to have your breakfast then? What about S? Why do you come to breakfast club?

**S:** Cos I don't have breakfast at home

**Facilitator:** Right. Erm when you're at home on a weekend do you have your breakfast at home then?

[children nod]

**Facilitator:** You do? What kind of things do you have on a weekend?

**K:** Mini Weetabix

**Facilitator:** Pardon?

**K:** Mini Weetabix

**Facilitator:** What about M, what do you have on a weekend?

**M:** [no response]

**Facilitator:** Do you have any breakfast at home on a weekend?

**M:** Porridge

**Facilitator:** You have porridge. What about S?

**S:** Golden balls

**Facilitator:** You have golden balls at home as well? Lovely! Right, what do you do in the mornings when you don't go to breakfast club?

**S:** I just sit and wait for my dinner's done

**M:** Me, [sibling 1] and [sibling 2] get the Sega out and then we play on it all day

**K:** I just play on my Xbox

**Facilitator:** Brilliant! How do you feel in the morning before you have to come to breakfast club?

**S:** I feel tired

**Facilitator:** You feel tired? What about you M?

**M:** Happy

**Facilitator:** You're happy? That's good. And what about K?

**K:** [unclear]

**Facilitator:** And you're tired? And how do you feel when you get here?

**S:** I feel happy

**M:** I feel happy

**Facilitator:** You feel happy when you get to breakfast club? And K?

**K:** [unclear]

**Facilitator:** And you're happy. What makes you happy about being in breakfast club?

**M:** I like school

**Facilitator:** You like school? That's good.

**S:** Playing with my friends



**Facilitator:** Playing with your friends, that makes you happy in breakfast club? That's nice. What about K? What makes you happy about breakfast club?

**K:** Playing with my friends

**Facilitator:** Playing with your friends? Brilliant. Can you tell me what is your favourite part of breakfast club?

**M:** Playing

**Facilitator:** What's your favourite thing to play?

**M:** Building stuff

**Facilitator:** Building stuff? Brilliant. S, what's your favourite part of breakfast club?

**S:** Playing with the cards with J

**Facilitator:** Right, that's good and what about K? What's your favourite part of breakfast club?

**K:** Playing with the parachute

**Facilitator:** Playing with the parachute? That's nice. What could be done to make your breakfast club even better?

**S:** Play outside

**Facilitator:** You'd like to play outside? What about K, what do you think? What could be done to make your breakfast club even better?

**K:** To play outside

**Facilitator:** You would like to play outside? Even when it's rainy like this?

**S:** No

**K:** No

**Facilitator:** What about you M? What would you like?

**M:** To play outside sometimes

**Facilitator:** To play outside sometimes. Do you stay in breakfast club all the time?

**M:** Yeah

**Facilitator:** Last thing. What would happen if your breakfast club closed and you couldn't come anymore? How would you feel?

**S:** Sad

**Facilitator:** You'd be sad. Why would you be sad?

**S:** Cos you won't get to see your friends

**Facilitator:** Right. Why would you be sad? [looking at M]

**M:** Er cos I don't get to see my friends

**Facilitator:** Right. K? How would you feel if there was no breakfast club anymore?

**K:** Sad

**Facilitator:** You'd be sad? And would you still have your breakfast in the morning?

**K:** [nods head]

**Facilitator:** You would?

**S:** [nods head]

**Facilitator:** You would S? Still have your breakfast if breakfast club closed?

**S:** [shakes head]

**Facilitator:** You wouldn't?

**S:** [shakes head]

**Facilitator:** No? And what about you M? Would you still have breakfast if you didn't come to breakfast club?

**M:** [shakes head]

**Facilitator:** You wouldn't?

**M:** [shakes head]

**Facilitator:** No? Right and the last thing just before you go back to class, is there anything that you'd like to tell me about your breakfast club that you haven't said already?

**S:** [puts up hand]

**Facilitator:** What would you like to say S?

**S:** Go home after

**Facilitator:** You'd like to go home after breakfast club instead of going into school?

**S:** [nods head]

**Facilitator:** I see. What about M, is there anything else you'd like to tell me about breakfast club?

**M:** [shakes head]

**Facilitator:** No? And what about K?

**K:** [shakes head]

**Facilitator:** Okay, that's brilliant.

## **Appendix Eiii: Example transcript from Study 1a: School Staff**

**Interviewer:** Ok to start with can you tell me about your school breakfast club?

**S14:** Erm it runs every morning erm from ten to eight the children who go there- there's a range of children but I don't think there's very many about ten kids and it's run by [BC Staff 1] and [BC Staff 2] and [BC Staff 3] sometimes and they go they get breakfast and then at half past eight she brings them over to be in the school yard ready for school starting

**Interviewer:** Right, do you know anything about the activities that they do at breakfast club?

**S14:** Erm not really I don't have a great deal to do with breakfast club

**Interviewer:** What do you think the reasons are for children attending your school breakfast club?

**S14:** I think there's a multitude of reasons, I know there's some children who do go to erm breakfast club some of them go because they can't get their kids in school on time so it's been something that has been erm suggested by school and other agencies that work with school erm others it's for working parents who have to start work early therefore have no one to look after their kids to feed them breakfast so they go to breakfast club erm I know there's sometimes I've heard a parents say once it's just to get them out the house quick of a morning

**Interviewer:** I see erm do you think breakfast club's successful in helping parents who can't get their kids in on time?

**S14:** Yes, yeah I do because nine times out of ten if kids are running late the first thing that goes is breakfast and they just won't get any so if they've slept in and oh or they haven't been getting ready or whatever they're not gonna get breakfast erm but if the parents have got say I don't know they must be in for breakfast at this time the kids'll generally get the parents sorted so they can take themselves to breakfast club

**Interviewer:** Right erm what difference do you think the breakfast club makes to the children who attend?

**S14:** Masses erm I know from personal experience if I don't have breakfast or something to eat before school then I can't concentrate and I've seen kids do it, not necessarily- throughout my career if they don't have

breakfast you can tell because they're not as focussed, they don't- they don't listen as well and they drift off more so you can tell if you've had breakfast and I've in the past I've had kids where I've said actually pulled them aside and said look you had anything to eat this morning and have been known to send kids off to the kitchen to get something erm but as a teacher you can see when they're not performing as well as they could be because they're hungry and it's an overriding thing so if you're hungry you're not gonna do what you've been told to do, your main focus is my god I'm hungry

**Interviewer:** Great erm what difference do you think the breakfast club makes to the parents?

**S14:** Well for those parents who need to be at work it kind of takes the stress off family members so like er grandparents or cousins or whatever they don't have that stress and then also it's literally you just get them up get them dressed get them out there's no carrying on there's no- it's much quicker than having to sit down to have breakfast and then for those parents who have erm like attendance problems or time like lateness problems then by getting them to breakfast club it kind of makes sure that yes they get breakfast at starting but also that the kids are here on time so it's better for the child and the child gets more of their erm work that they're supposed to so they haven't missed like half a day- erm half an hour every day which adds up to like two and a half hours so-

**Interviewer:** Right erm what difference does the breakfast club make to the school and staff?

**S14:** Erm hmm I don't know, I suppose the staff some of them- the staff who run it, it would make an impact on their lives cos obviously they've got to be at school early or whatever but erm I don't think there's a great impact on school and staff really it's just those core staff that have anything to do with it erm who run it erm I don't know I don't think there's a massive impact

**Interviewer:** Erm there've been suggestions in the media recently that parents should be the ones responsible for giving their children breakfast and this responsibility shouldn't be put onto the schools what do you think about that?

**S14:** Erm that's all well and good but if you have parents who don't get themselves together and feed their kids then what do you do with those kids? If there was no breakfast club I know for a fact there would be a

selection of children in our school who wouldn't get anything erm so I don't think it makes a difference to be honest and sometimes parents are just too busy I know that sounds awful but the parents who work would rather leave their children having an extra bit of sleep that they would need during school and then take the kids to breakfast club than erm you know getting them up half an hour earlier to make sure they breakfast

**Interviewer:** Uh hum you've mentioned some of these already but what do you see as the positive aspects of breakfast club?

**S14:** Positive aspects of breakfast club erm they've got someone to go and talk to er cos sometimes if you're a parent you've only got one child they just sit and eat their breakfast in silence cos you're too busy getting ready for work or whatever erm gets kids in school on time erm something to eat before school so the concentration levels are as high as they can be erm they get something nutritious because I know that they get they get like a options of all sorts cos we were discussing it before and they get like you can have beans on toast you can have scrambled egg on toast you can have all this stuff that they wouldn't have got at home you'd have got a box of cereal so they've got like an array of choices they can have and not just half a packet of biscuits on the way to school

**Interviewer:** Brilliant erm what could be done to improve breakfast club?

**S14:** Probably the only thing I would suggest is to increase the numbers cos at the minute we can only cater for so many so maybe see if there was any need for any more to do for breakfast club and then address that from there but it would depend on staffing issues and everything else so-

**Interviewer:** Erm last thing I'd like to cover, what impact would it have if the breakfast club closed down so thinking about the pupils what would the impact be?

**S14:** I can tell you now at least three of them would be late erm just thinking of who I know goes to breakfast club from over here parents would struggle especially one of the girls whose mum works erm would struggle to get her somewhere else so then she'd be more hassled of a morning so if you're more hassled on a morning before you come to school that's gonna disrupt your whole day, those kids who wouldn't get breakfast would be disruptive erm because they're hungry or erm withdrawn or they wouldn't be as productive as they could be and as a teacher that's what you want you want them at their most productive and the productivity of

the child goes down throughout the day anyway but if it starts off at a low standard then it's only gonna get worse so it's important

**Interviewer:** Brilliant erm you've touched on this a bit but what would the impact be for the parents if the breakfast club closed?

**S14:** If breakfast club closed some of the parents obviously with the attendance issues would have to sort themselves out and make sure they'd got all their kids got breakfast and did this and did that and then still get them to school on time obviously if you go to breakfast club you've got that bit of lee-way erm also if you've got a parent that works having to try and source somebody else to look after that child for even if it is just half an hour before they go to school it's still half an hour that needs to be catered for so it would put a strain on families, on friends depending on where this child would end up erm and obviously it would increase stress levels because if you've gotta get somebody else ready and breakfast as well as everything else you've gotta do on a morning I know from- well I'm rubbish on a morning so you know getting myself sorted is bad enough but having to get somebody else sorted as well don't think so [sighs]

**Interviewer:** Erm what about for school staff would there be an impact for school staff if the breakfast club closed?

**S14:** For the three staff who run it yeah because there would be obviously the reduction in pay for a start which is always an issue for anybody and then some of the hours so they may have to take up hours somewhere else to do something else to you know keep money the same erm and they genuinely like it from what I can gather they like seeing the kids first thing on a morning making sure they have something nice and it's like for [BC Staff 2] anyway I know she has the big mother thing she loves it she loves making sure all the kids have got enough and you know the kids in breakfast club sometimes get seconds and what have you cos they're still hungry they're allowed it's fine just get on with it you know what I mean so-

**Interviewer:** Yeah and what about for the school as a whole, the school community?

**S14:** For the school community probably as a teacher I'm thinking about it if the kids haven't had breakfast they're gonna do less they're gonna be more disruptive I'm gonna get more annoyed with those kids that means my class is gonna be obviously more disrupted by me by the child you know

in question but that stops them from being able to get on with whatever it is we were going to do so-

**Interviewer:** Uh-hum so it has a big knock on effect?

**S14:** Well yeah massive

**Interviewer:** That's great erm finally is there anything else that you'd like to mention about breakfast club that you haven't covered already?

**S14:** No

**Interviewer:** Brilliant, thank you very much



## Appendix F: Example quotes illustrating themes from Study 1a

Themes	Subthemes	Quotes from Parents	Quotes from Staff	Quotes from Children
Social Opportunities	Time for informal interaction	<i>"They get to spend a little bit of time with their friends kind of out of the classroom I suppose so they're able to perhaps do a bit of chatting where at school they have to kind of do their work and times for chatting is playtime"</i> (Mother of 3 Children)	<i>"You can have a little bit of chatter, you can chat- last night did you watch the football last night? Load of rubbish weren't they?"</i> (Teaching Assistant & Breakfast Club Staff Member)	<i>"My favourite part is just like sitting down on the chairs and looking at each other and talking to each other"</i> (Girl, aged 10 years)
	Socialising across groups	<i>"He's sort of made friends with erm different age groups as well within there he talks about other children now as opposed to some of the class children that he's obviously he spends a lot of time with"</i> (Mother of 1 child)	<i>"These are like from the eldest of our children down to the smallest of our children and they're mixing so it's giving them a different experience than what they would have just in the playground with other kids"</i> (Social Inclusion Officer & Breakfast Club Staff)	<i>"If you make friends with Key Stage Two boys they have to go over the road so you- you can't see them at play, only at breakfast club"</i> (Girl, aged 7 years)  <i>"Me and [child] have friends that are from here and [other school]"</i> (Girl, aged 10 years)

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Social Opportunities</b>	<b>Helps overcome social limitations</b>	<p><i>“She likes erm playing with other kids, she’s an only child so she enjoys the interaction”</i> (Mother of 1 Child)</p> <p><i>“She doesn’t like coming into the playground on her own, she’s quite shy erm so it just gives her that chance to come in and see her friends then she’s quite happy to go out onto the playground”</i> (Mother of 4 Children)</p>	<p><i>“Sometimes if you’re a parent, you’ve only got one child, they just sit and eat their breakfast in silence cos you’re too busy getting ready for work or whatever”</i> (Class Teacher)</p>	
	<b>Relationship development</b>		<p><i>“They have a very good relationship with [Breakfast Club Staff]. The children speak very fondly of her”</i> (Class Teacher)</p>	<p><i>“You can meet all your friends and everything and you can meet new friends”</i> (Boy aged 9 years)</p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Enjoyable time</b>	<p><i>“He’s gone right from the nursery from starting at the nursery when he was three and he absolutely loves it”</i> (Mother of 1 Child)</p> <p><i>“He didn’t actually have to attend but because he enjoyed it so much he wanted to attend so that’s why he does two days now as opposed to one”</i> (Mother of 1 child)</p>	<p><i>“They’re just enjoying themselves before they go into school, no structure, no teaching, just having a laugh, mixing”</i> (Teaching Assistant and Breakfast Club Staff)</p> <p><i>“I like it really, it’s the best part of my day to be honest with you, I just love it”</i> (Teaching Assistant and Breakfast Club Staff)</p>	<p><i>“I love it there cos it’s so much fun”</i> (Boy aged 4 years)</p>
	<b>Better than alternative options</b>	<p><i>“If they’re at home all they do is fight and argue but they’re alright in school”</i> (Mother of 6 Children)</p>	<p><i>“There’s probably some children who might be better off in breakfast club than what they see at home”</i> (Class Teacher)</p>	<p><i>“If you don’t go to breakfast club you’re like a bit bored and when you go into school you’re like you still have loads of energy inside you and you’re just like messing about”</i> (Girl, aged 11 years)</p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Helps attendance and punctuality</b>	<p><i>"They're here, they're guaranteed to be at school on time so I don't get into trouble for them being late"</i> (Mother of 5 Children)</p> <p><i>"If I don't come to breakfast club I wouldn't get them to school on time"</i> (Mother of 6 Children)</p>	<p><i>"Without it we'd have a lot more children who would be absent, wouldn't get in on time, who'd be late"</i> (Teaching Assistant and Breakfast Club Staff)</p> <p><i>"Since they've started their lates have just gone by the by, they're just not late anymore cos they come to breakfast club"</i> (Teaching Assistant and Breakfast Club Staff)</p> <p><i>"How long that will go on for- I think when social care stops paying their money they might slip back into the routine"</i> (Teaching Assistant and Breakfast Club Staff)</p>	<p><i>"It gets me to school earlier so I don't miss half my lessons on maths"</i> (Boy, aged 7 years)</p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Calmer Start</b>	<p><i>"We can all be a little bit more relaxed on a morning and at least I know they're going to get something rather than trying to rush them into getting some breakfast"</i> (Mother of 3 Children)</p> <p><i>"If I wake her up in the morning and say we're at breakfast club this morning she will get up earlier than she gets up if it's just normal school"</i> (Mother of 1 Child)</p>	<p><i>"It's much more calm atmosphere where they can sit, chat to friends, eat breakfast, without the stress of parents pushing them and getting them moving to leave on time"</i> (Class Teacher)</p>	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Prepares children for the school day</b>		<i>"It kind of sets them up for the day really, they're into school mode and it becomes part of their little routine and they're a bit more alert I think by the time they're coming into school"</i> (Head Teacher)	<i>"At breakfast club like you have fun and you do some stuff energetic and it gets you like awake for when you come into school and you're not just dosing off in your chair and that"</i> (Girl, aged 11 years)
<b>Breakfast Meal Provided</b>	<b>Variety of breakfast foods available</b>	<i>"I think it broadens her horizons like if there's something that she hasn't tried at home and she sees somebody else eating it she might try it or give it a go"</i> (Mother of 5 Children)  <i>"He comes home and says I tried melon or so and so or whatever will you buy one of them?"</i> (Mother of 3 Children)	<i>"I think encouraging children to eat different things and try different things it maybe gives them that opportunity to eat things that they wouldn't eat at home"</i> (Class Teacher)	<i>"I like going to breakfast club because you can have anything, you can have cereal and toast"</i> (Girl, aged 7 years)  <i>"You get Frubes [yogurt] there, I wouldn't get Frubes for breakfast"</i> (Girl, aged 10 years)

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Breakfast Meal Provided</b>	<b>Children more willing to eat breakfast</b>	<i>"They come here and they have cereal and toast and a drink and it's funny how they eat it here but they won't eat it at home"</i> (Mother of 2 Children)	<i>"Children will eat better cos there's other children about. I know some parents have sent children because of that"</i> (Class Teacher)	
	<b>Healthy options available</b>	<i>"Obviously they're having something healthy in the morning and not like- I know some- well I know a few people I know and they just give their kids cereal bars and something you know something quick cos they get up late"</i> (Mother of 2 Children)	<i>"They're not coming to school with a packet of crisps or a bar of chocolate or a fizzy drink, at least you know what they're getting don't you"</i> (Social Inclusion Officer and Breakfast Club Staff)	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Breakfast Meal Provided</b>	<b>Breakfast skipped at home</b>		<p><i>“From the area what we live in there are lots of children that don’t get breakfast” (Trainee Teacher)</i></p> <p><i>“We have some parents who actually can’t afford to give their children breakfast so like a full family will come for breakfast” (Teaching Assistant and Breakfast Club Staff)</i></p>	<p><i>“We haven’t got no food have we [brother]?” (Boy, aged 5 years)</i></p> <p><i>“Well sometimes I don’t really have breakfast... Cos like I can’t be really be bothered” (Girl, aged 7 years)</i></p>



**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Means of Support</b>	<b>Support for working parents</b>	<p><i>"I think it's fantastic that it can be provided and from eight o'clock's brilliant cos especially for me to get out and get to work I just think it's a really good service it's been fantastic for me"</i> (Mother of 2 Children)</p> <p><i>"It's just good to know that I have got child care cos I am a working mum and I actually don't know what I'd do without the breakfast club"</i> (Mother of 1 Child)</p>	<p><i>"When you work, if you- you need child care- child support, so if we're offering ur- ur- an alternative to nursery or childminder well it's fair, it's fair you know otherwise a parent might not be able to work and the breakfast club's a lot cheaper than a childminder, a lot cheaper"</i> (Class Teacher)</p>	<p><i>"If your parents both work it's a good place to go"</i> (Girl, aged 10 years)</p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Means of Support</b>	<b>Support for working parents</b>		<i>'It's easier I think to make arrangements after school if you need to for meetings and things than it is before school, there are not many- whereas they might want to go- to go to grandma's or their friends house or something after school, people generally don't want other people in their houses in the morning'</i> (Deputy Head Teacher)	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Means of Support</b>	<b>Offers flexibility</b>	<p><i>"They're not the kind of children where they wake up and they're instantly hungry it usually takes them a good half hour or so to want to get some breakfast so erm yeah it's just less- less- something less to think about more than anything"</i> (Mother of 3 Children)</p> <p><i>"I could just say oh look can I get her in and er it worked out easier for me"</i> (Mother of 2 Children)</p>	<p><i>"Obviously if you go to breakfast club you've got that little bit of lee-way"</i> (Class Teacher)</p> <p><i>"If a mam's got an appointment at hospital we can just say to her even if it's just a one-off, fill a form in and you can come to- we can give you breakfast club for that day"</i> (Teaching Assistant and Breakfast Club Staff)</p>	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Means of Support</b>	<b>Provides peace of mind</b>	<i>"Knowing that your child is safe and you're not just coming in and dumping your child in the playground, knowing that when you go to work or wherever you're going your child is in here, it's safe"</i> (Mother of 1 Child)	<i>"It's knowing that there's somebody there to look after them and that they're gonna be well looked after and that they're not worrying about getting them to school and that they're safe"</i> (Trainee Teacher)  <i>"If I know of particular children have been to breakfast club and have had breakfast then that's sort of less concern for us isn't it"</i> (Teaching Assistant and Breakfast Club Staff)	
	<b>Sense of community</b>		<i>"It helps the parents get involved with school activities and what's going on within school"</i> (Teaching Assistant)	<i>"Breakfast club is one big happy family because like we get along really well"</i> (Girl, aged 10 years)

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Means of Support</b>	<b>Communication through breakfast clubs</b>		<p><i>"It is hard for our parents who haven't got a lot of social skills to come into the main office to ask something where it's easy to just ask us sometimes"</i> (Teaching Assistant and Breakfast Club Staff)</p> <p><i>"She builds up that rapport with them and they have somebody who they can confide in"</i> (Class Teacher)</p>	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Integral Part of School</b>			<i>"It gives the school a good spec in terms of wraparound care that type of thing so in terms of OFSTED and the public image of the school and facilities we can provide that's a good thing"</i> (Class Teacher)	
<b>Variety of Activities</b>				<i>"My favourite part is playing doctors cos there's my doctor case what I was playing with today with [friend]"</i> (Girl, aged 5 years)

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Food Issues</b>	<b>Poor nutritional standards</b>	<p><i>"Nothing serious or major it's just she asks for a lot of sugar on her cereal and I normally wouldn't give her that much sugar" (Mother of 1 Child)</i></p> <p><i>"Maybe like have a healthy day where they only have healthy cereals and they don't put sugar on the cereals" (Mother of 5 Children)</i></p>	<p><i>"There's a variety of breakfasts I know there's only a certain amount of what would be classed as unhealthy stuff they're allowed each week" (Class Teacher)</i></p> <p><i>"If it's not stamped on by people who are you know higher management in this school than me I'm not prepared to get into arguments with members of staff over it so that's kind of where I would back track in my role" (Healthy Schools Coordinator)</i></p>	<p><i>"If your mam doesn't have any chocolate spread or jam you can have chocolate spread and jam at breakfast club" (Girl, aged 7 years)</i></p> <p><i>"Have cup of teas" (Girl, aged 7 years)</i></p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Food Issues</b>	<b>Poor nutritional standards</b>		<i>"You've got to show them these are your options available if you just ate that there's too much sugar and fat but if you have some of that and some of that and some of that that's a balanced diet"(Head Teacher)</i>	Facilitator: <i>"What could be done to make your breakfast club even better?"</i> Child: <i>"Erm well what we would say is like have unhealthy food but that's like you can't do that with like Coco Pops and stuff" (Girl, aged 11 years)</i>
	<b>Lack of variety</b>	<i>"The only thing they ever do moan about is like the variation of breakfast cereal, they say they seem to buy the same cereal you know instead of something different, that's the only thing I could fault the breakfast club for really" (Mother of 2 Children)</i>		



**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Excluding Children</b>	<b>Cost barrier</b>		<p><i>“Those who don’t get breakfast before they come to school are very often children who would benefit more from it, however there’s the cost involved so that’s a reason for people not sending children” (Class Teacher)</i></p> <p><i>“I think they should do it free I do think very much they should be free or very cheap otherwise you are alienating quite- it depends what your school is like but you are alienating quite a large proportion” (Teaching Assistant and Breakfast Club Staff)</i></p>	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Excluding Children</b>	<b>Teachers give ad hoc breakfast</b>		<i>"We've had two girls particularly who've come and said I haven't had breakfast this morning. [Breakfast Club Staff] and I do go and look for something to try and give them"</i> (Class Teacher)	
	<b>Additional support unavailable</b>		<i>"There was a little boy who had one to one support in school and his mam wanted him to come but we said we couldn't take him because the two pound a day that wouldn't even touch the cost of staffing"</i> (Head Teacher)	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Practical Concerns</b>	<b>Facilities need improvement</b>		<p><i>"In an ideal world I think it would be more child friendly in terms of furnishings and look and feel and welcoming atmosphere rather than quite an austere old persons building"</i> (Deputy Head Teacher)</p>	<p>Child 1: <i>"Maybe more toys"</i> (Girl, ages 9 years)  Child 2: <i>"More?"</i> (Boy, aged 8 years)  Child 1: <i>"Well not more but all the ones that we've got are quite old and some of them are broken a bit"</i> (Girl, aged 9 years)</p> <p>Facilitator: <i>"What could be done to make your breakfast club even better?"</i>  Child: <i>"Play outside"</i> (Girl, aged 7 years)</p>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Practical Concerns</b>	<b>More staff and children wanted</b>		<p><i>"I think it would be better to maybe have more members of staff so that you can take more children in" (Teaching Assistant)</i></p> <p><i>"I know they're rushed and they don't have enough time they say but see the timing's not to do with me and sometimes there's only one of them and if it's a full breakfast club-" (Healthy Schools Co-ordinator)</i></p>	<i>"I would like more people to come in so you can make more friends" (Girl, aged 7 years)</i>

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Practical Concerns</b>	<b>Staff missing elsewhere</b>		<p><i>"Where other TA's are in at half eight and they're there for twenty minutes doing photocopying and getting ready for the day, I do all of it myself because [Breakfast Club Staff] can't" (Class Teacher)</i></p> <p><i>"I like doing the breakfast club, I don't mind but it's put a restriction on me because I've been in here since quarter past half past seven this morning, I have my things to do in the classroom do you know what I mean" (Teaching Assistant and Breakfast Club Staff)</i></p>	

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Long Day</b>	<b>Extended school day</b>		<i>"We've had some children who go to breakfast club and they go to after school club so their parents drop them off at eight o'clock in the morning and they don't see anybody else from their family til half past five"</i> (Class Teacher)	
	<b>Tired children</b>			Facilitator: <i>"How do you feel in the morning before you've got to come into breakfast club?"</i> Child 1: <i>"Tired"</i> (Girl, aged 10 years) Child 2: <i>"Exhausted"</i> (Boy, aged 10 years)

**Appendix F (continued): Example quotes illustrating themes from Study 1a**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Long Day</b>	<b>Tired children</b>			<p>Child: <i>"I have to get up too early"</i> (Girl, aged 11 years)</p> <p>Facilitator: <i>"You have to get up too early? So how do you feel about that?"</i></p> <p>Child: <i>"Um sleepy and not really happy but then I cheer up when I actually get there and it's alright"</i> (Girl, aged 11 years)</p>

**Appendix G: Coding discrepancies and resolutions for Study 1a**  
**Quotes from Children**

<b>Quote</b>	<b>Principle Investigator Interpretation</b>	<b>Second Coder Interpretation</b>	<b>Resolution</b>
"I'm like the only child in my house and like I was always just like bored"	<i>Social Opportunity</i> Quote suggests that breakfast club can break down barriers to social opportunities	<i>Positive Start</i> Quote suggests that the child perceives breakfast club as a more positive and enjoyable start to their day.	<i>Both codes fit equally well</i>
"When I come I like get happy because it pu- like cos it's like a sa- fun place to go and it's good"	<i>Positive Start</i> Child began by talking about time with friends but went on to talk about being happy and breakfast club being a fun place to go thus providing a positive start.	<i>Social Opportunity</i> Use of the word 'fun' indicates positive experiences with other children and staff.	<i>Positive Start</i>
Facilitator: "Brilliant. So are you quite happy to go to breakfast club?" Both: "Yeah"	<i>Positive Start</i> Children were happy to go to breakfast club so it could be suggested that a happy start is a positive start to the school day	<i>Not Coded</i>	<i>Positive Start.</i>



## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Sometimes erm when you're having so much fun you just don't wanna go to school"	<i>Positive Start</i> Quote suggests that children are enjoying breakfast club so much they do not want to leave	<i>Not Coded</i>	<i>Positive Start</i>
Facilitator: "So you deal with it in breakfast club before you go into school?" C1: "Yeah well if it keeps carrying on I tell Miss erm-" C2: "[BC Staff]" C1: "[BC Staff] yeah and then if she says like she would tell them off and then the- then I would have to say sorry too for getting angry at them"	<i>Positive Start</i> Conflicts are dealt with in breakfast club before going into school, which means that children should have a more settled start to the school day because trouble is not being taken into the classroom	<i>Not Coded</i>	<i>Not Coded</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"it's already good she's done well with it and we really like going"	<i>Positive Start</i> Child mentions they enjoy going to breakfast club so this could be interpreted as providing a positive start to the school day	<i>Not Coded</i>	<i>Positive Start</i>
"I think if you asked any of the [other school] cos like you can't talk to them but if you asked any of them I think they'd like say that they enjoyed it as well"	<i>Positive Start</i> Reference to breakfast club providing a positive start to the day	<i>Not Coded</i>	<i>Positive Start.</i>
"At breakfast club I used to have crumpets but now I have toast and once a week we get beans on toast, you can get apple juice and orange juice and different types of cereals"	<i>Breakfast Meal Provided</i> Child talks about the variety of foods available at breakfast club	<i>Food Issues</i> Upon second reading the quote is more fitting to the principle investigator's interpretation.	<i>Breakfast Meal Provided.</i>
"It's like safe and welcoming and like if you were just new then-then [BC Staff] would just open the door and be like really cheerful and happy"	<i>Means of Support</i> Children are made to feel safe as soon as they arrive at breakfast club	<i>Positive Start</i> The child perceives BC as an enjoyable and positive experience at the start of the school day.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
C1: "Yeah and like we can do choices, we can say can we have like waffles, pancakes but Miss has to look if they're erm got-" C2: "Healthy enough"	<i>Breakfast Meal Provided</i> Child provides examples of different choices available at breakfast club but there is also some acknowledgement that breakfast club staff members have to make sure that options are healthy	<i>Food Issues</i> Quote indicates that less healthy choices are available; however, this appears to be negated in the context of the quote within the transcript as the breakfast club staff monitor the children's intake of these foods.	<i>Breakfast Meal Provided</i>
"Yeah like if we say can we have Nutella she'll say no cos it's got loads of sugar in"	<i>Provision of Breakfast</i> Child suggests that breakfast club food choices are monitored to ensure they are healthy	<i>Food Issues</i> Quote illustrates that children think it is acceptable to have unhealthy options available in breakfast club	<i>Provision of Breakfast</i>
"I do that when I like go to bed really late I wake up all moody and then when I come I'm just dead happy"	<i>Positive Start</i> Child talks about being happy when coming into school suggesting that breakfast club promotes a positive start to the school day	<i>Long Day</i> In context the quote indicates that children may be getting up earlier to attend BC resulting in tiredness.	<i>Positive Start</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Sometimes if my granda comes and I haven't seen him for a like a long time I get upset and then when I go to breakfast club sometimes like I cry and then [BC staff], [Child 2], [Child 1] all-everyone just makes me happy"	<i>Means of Support</i> Child talks about receiving emotional support from staff and peers in breakfast club	<i>Social Opportunities</i> Child is provided with social opportunities to talk about their emotions and feelings.	<i>Means of Support</i>
"Breakfast club is one big happy family because like we get along really well"	<i>Means of Support</i> Quote suggests that close, family-like relationships are developed in breakfast club. To describe breakfast club as a family unit could suggest that children are supported.	<i>Not Coded</i>	<i>Means of Support</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Well I have pancakes, like really crispy pancakes"	<i>Not Coded</i>	<i>Food Issues</i> Child discusses food available at BC.	<i>Not Coded</i>
"Cos I have lots of friends"	<i>Not Coded</i>	<i>Social Opportunities</i> Quote indicates that the child has friends at BC.	<i>Not Coded</i>
"Like that's what happens to me because when [brother] wasn't born like I used to go, me and my sister but she use- but her f- sis- her- the mam of her friend used to take her to school"	<i>Not Coded</i>	<i>Social Opportunities</i> Child indicates that if not for BC they would be spending the time without the company of other children. Indicating that BC offers social opportunities.	<i>Social Opportunities.</i>
"But then at the end of the day we just become friends again"	<i>Not Coded</i>	<i>Social Opportunities</i> Child indicates that BC provides opportunities to resolve issues amongst peers.	<i>Not Coded</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
Facilitator: "Would you have something different if you were at home?" C2: "Probably"	<i>Not Coded</i>	<i>Provision of Breakfast</i> In context the quote indicates that the child is more likely to sample a variety of food at BC in contrast to home where higher sugar options are eaten.	<i>Provision of Breakfast</i>
C2: "On special occasions like say it was Christmas or something she would like get us something" C1: "Get us like advent calendars like she'd put our names in" C2: "She'd put our names in er a jar" C1: "And we'd take turns to pick them out and then they would have sweet- they would have chocolate inside"	<i>Not Coded</i>	<i>Food Issues</i> Staff use high sugar sweets and chocolates as treats and rewards.	<i>Not Coded</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I asked [BC Staff] how many children you're allowed like and you're only allowed so many but I can't remember how much now it's cos it would like get chaotic if there's too many there's only like [BC Staff] and [BC Staff]"	<i>Not Coded</i>	<i>Practical Concerns</i> Quote indicates that the child is aware of potential staffing issues should take up of BC increase.	<i>Practical Concerns</i>
"Like some- my friend, my friend and her sister come sometimes when her mam's at work [child] and [child]"	<i>Not Coded</i>	<i>Social Opportunities</i> Child indicates that BC provides opportunities to socialise with familiar peers.	<i>Social Opportunities</i>
Facilitator: "When you said about you would have more unhealthy things for breakfast, why would you have more unhealthy things for breakfast?" C2: "Dunno cos Coco Pops are like nice"	<i>Not Coded</i>	<i>Food Issues</i> Quote indicates that child thinks it's ok to have unhealthy food options at BC. However, in context the child does indicate that they have an understanding of why unhealthy options are limited or unavailable.	<i>Food Issues</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"We'd be healthier but like we like them stuff but we're healthier and we still like the stuff that we have now"	<i>Not Coded</i>	<i>Food Issues</i> Interpretation does not fit code description provided; however, in context the quote indicates that whilst the child enjoys food with higher sugar content they consider the impact on their health and a balanced diet.	<i>Not Coded</i>
"And like sometimes Miss gets us hot chocolate"	<i>Not Coded</i>	<i>Food Issues</i> Quote indicates that child perceives 'hot chocolate' as a treat that is available at BC. Sugar content of hot chocolate may be considered an 'unhealthy' option.	<i>Not Coded</i>



## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Children (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"And like what [C2] said about packing up jobs then like we wouldn't- cos Miss makes our own but like my- our mam's have to pay for it and stuff and [BC Staff] does and then so I would be a bit sad and I would be sad that if it closed down because it won't be fair on the other kids"	<i>Not Coded</i>	<i>Practical Concerns</i> Child shows concern for other children in the instance of the closure of BC.	<i>Not Coded</i>
"In the yard there's loads of like fights between friends but in breakfast club there is like about one fight and then in two seconds we just like snap like that and be friends and then we're just friends again"	<i>Not Coded</i>	<i>Social Opportunities</i> Quote indicates that there is less conflict in BC than in the school yard. This would indicate that BC provides an environment where social relationships amongst peers are nurtured.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"It's just less- less- something less to think about more than more than anything"	<i>Not Coded</i>	<i>Means of Support</i> Breakfast club provides a means of support to this parent and alleviates pressures on the morning routine.	<i>Means of Support</i>
"They both enjoy going, that's the main thing"	<i>Positive Start</i> Quote refers to children's enjoyment of breakfast club thus providing a positive start to the day	<i>Social Opportunities</i> In context the quote indicates that the children enjoy BC because they spend time with friends outside the classroom.	<i>Positive Start</i>
"They can get their breakfast as well"	<i>Breakfast meal provided</i> Parent mentions that children are able to get breakfast at breakfast club	<i>Not coded</i>	<i>Breakfast Meal Provided</i>
"So it's a little bit less rushed on the morning"	<i>Positive start</i> Less rush in the family home in the morning is likely to provide a more positive environment	<i>Means of support</i> Quote indicates that BC is a means of support for parents.	<i>Positive Start</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"For timing wise it's, I get everything out of it that that I need to to get really"	<i>Not Coded</i>	<i>Means of Support</i> Quote indicates that the timings of BC are convenient to the parent and therefore offer a means of supporting them on a morning.	<i>Not Coded</i>
"I would have to work later in the day which would probably mean me using it after school which is a little bit more, more money for to send the children so it would have for me it would have a big impact if I couldn't I couldn't send them"	<i>Means of Support</i> Parent discussed how breakfast club supported her shift pattern at work	<i>Excluding Children</i> Upon second reading the quote does not fit in with this code.	<i>Means of Support</i>
"Yeah, yeah, yeah. If I do, if I do do a four day like kind of a four morning it's usually a Friday that I take him in and whether it's just cos he's been there all week and he's tired"	<i>Not Coded</i>	<i>Positive Start</i> In the context of the transcript the quote indicates that the parent perceives the child to be more positive on the days they attend breakfast club.	<i>Positive Start</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I choose to work on a morning then I'm able to get the tea and get that family time sitting down"	<i>Not Coded</i>	<i>Means of Support</i> Quote indicates that the parent perceives BC as a means of support in the respect that it fits in with their work commitments.	<i>Means of Support</i>
"The main thing is the kids enjoy going"	<i>Positive Start</i> Reference to children enjoying breakfast club, which suggests it provides a positive start to the day	<i>Means of Support</i> Upon second reading the quote does not fit in with the <i>description of this code</i> .	<i>Positive Start</i>
"They get a little something to eat"	<i>Breakfast Meal Provided</i> Parent mentions children being able to get breakfast at breakfast club	<i>Means of Support</i> In context the quote indicates that the parent perceives this as part of the package of support; in addition to childcare.	<i>Breakfast Meal Provided</i>
"My three usually set the toys out on a morning"	<i>Not Coded</i>	<i>Variety of Activities</i> Quote indicates that children are involved in the organisation of the planned activities at BC.	<i>Variety of Activities</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"They'll like have their breakfast"	<i>Breakfast Meal Provided</i> Reference to children being able to have breakfast at breakfast club	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"I help out at breakfast club so erm it's just they wanted to come"	<i>Not Coded</i>	<i>Means of Support</i> BC offers an environment where children can be taken into the parent's workplace and therefore offers a means of support.	<i>Means of Support</i>
"I like it er cos I don't like them being off school they get 100% attendance they might as well be at breakfast club"	<i>Not Coded</i>	<i>Positive Start</i> Parent perceives their child's attendance at breakfast club as a positive start to the day which fits in with their already high attendance at school.	<i>Positive Start</i>
"I know they're getting breakfast, toast, cereal and a drink"	<i>Breakfast Meal Provided</i> Parent talks about breakfast being provided to children at breakfast club	<i>Positive Start</i> In context the parent associates the breakfast with improved cognitive functioning and therefore a more positive start to the day.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"the brain starts working earlier, they're up and about and by the time they're in school they've been awake nearing on two hours"	<i>Positive Start</i> Quote suggests that breakfast club helps children to feel more alert at the start of the school day	<i>Means of Support</i>	<i>Positive Start</i>
"Some days they love coming in do you know cos they'll get to set the toys out, get to take the milk to nursery"	<i>Positive Start</i> Parent talks about children's enjoyment of breakfast club	<i>Social Opportunities</i> Parent indicates that BC provides children with opportunities to organise activities for other children and take on responsibilities supporting younger children at the nursery.	<i>Positive Start</i>
"It makes them get ready a lot quicker"	<i>Positive Start</i> Quote suggests that the morning routine is made easier as children get ready for school quicker when attending breakfast club	<i>Means of Support</i> Again this interpretation was based on the terminology of this code's label in the respect that it offers support in morning routines.	<i>Positive Start</i>
"I think it does get them started ready for the day"	<i>Positive Start</i> Refers to breakfast club setting children up for the day thus providing a positive start	<i>Social Opportunities</i> On reflection the second coder's interpretation does not fit in with the code description.	<i>Positive Start</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Some kids you see them walking to school and they're asleep"	<i>Positive Start</i> Parent talks about breakfast club helps children feel more awake at the start of the school day	<i>Long Day</i> On reflection the second coder's interpretation does not fit in with the code description.	<i>Positive Start</i>
"It gets them used to being up early especially when my oldest one starts senior school next year"	<i>Positive Start</i> Parent suggests that breakfast club helps children get into a routine of getting up earlier that will be beneficial when they move onto secondary school and have to get up and set off for school earlier	<i>Not Coded</i>	<i>Positive Start</i>
"There's only three of us usually behind the counter like one on cereal, one on toast and washing up and then you've got a few outside but it runs quite smoothly"	<i>Not Coded</i>	<i>Practical Concerns</i> Whilst the quote does not indicate that the interviewee has practical concerns, it does discuss the practicalities of BC such as staffing and organisation.	<i>Not Coded.</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Not all kids get breakfast, at least this way..."	<i>Breakfast Meal Provided</i> Parent suggests that some children don't get breakfast but having it available at school ensures that all children have the opportunity to have breakfast	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"You know them kids that walk through that door are getting something"	<i>Breakfast Meal Provided</i> Parent talks about breakfast being available to all children who attend breakfast club	<i>Positive Start</i> In context the quote indicates that BC provides a positive start to the day in the respect that staff/parents can be assured that children have eaten.	<i>Breakfast Meal Provided</i>



## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"It's practicality for parents more than anything else"	<i>Not Coded</i>	<i>Means of Support</i> Quote indicates that BC offers practical means of support for parents.	<i>Means of Support</i>
"The children know each other so you're bringing that whole school community thing together"	<i>Means of Support</i> Sense of community suggests that children are provided with a supportive environment	<i>Social Opportunities</i> Quote indicates that BC provides children with opportunities to socialise with other children.	<i>Both codes fit equally well</i>
"Parents have got to work haven't they"	<i>Not Coded</i>	<i>Means of Support</i> Quote indicates that the interviewee understands the necessity of parents to work, in the context of BC provision.	<i>Means of Support</i>
"I would like my little boy to go if obviously if he comes if he gets into school and what have you so and it would be good for me to not have him in class every morning to know that he's safe and in breakfast club"	<i>Means of Support</i> Staff member talked about how being able to put her son into breakfast club would make things easier for her starting work in the mornings	<i>Positive Start</i> Upon second reading the quote does not fit in with the description for <i>Positive Start</i>	<i>Means of Support</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"We've got to be out the door in about ten minutes so that's how it is for a lot of families"	<i>Not Coded</i>	<i>Positive Start</i> Quote indicates that the interviewee acknowledges that morning routines are often rushed, in the context of their opinion on whether breakfast provision is the parents' responsibility.	<i>Not Coded</i>
"It gives them that time to interact and not have to worry about I'm in school so I've got to do this or I've got to do that"	<i>Social Opportunities</i> Staff member talked about children having time to interact with peers without worrying about school related issues	<i>Positive Start</i> The interviewees comment about children not having to worry indicates that in contrast the start of school is more positive when the child attends BC.	<i>Social Opportunities</i>
"She makes connections with kids who especially the younger ones who then as they're going through school she builds up that rapport with them and they have somebody who they can confide in I suppose"	<i>Means of Support</i> Reference to children being able to confide in breakfast club staff suggesting that they are supported as they progress through school	<i>Social Opportunities</i> Quote indicates that children are provided with opportunities to build relationships with and interact with staff.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"It's a haven for some children isn't it"	<i>Means of Support</i> Suggests that breakfast club offers a supportive environment to children	<i>Positive Start</i> Quote indicates that BC is a positive environment, thereby offering a positive start.	<i>Both codes fit equally well</i>
"Ours is good fun whenever I'm in there they're always running riot and just doing crazy things so I think I'd like to go to breakfast club just to have a nice quiet morning just to have my breakfast just for five minutes have a sit down"	<i>Positive Start</i> Reference made to children having an enjoyable start to the school day	<i>Variety of Activities</i> Interviewee refers to the fun and lively activities that happen within breakfast club.	<i>Both codes fit equally well</i>
"If the parents have got say I don't know they must be in for breakfast at this time the kids'll generally get the parents sorted so they can take themselves to breakfast club"	<i>Positive Start</i> Staff member talked about how breakfast club motivated children to get to school on time	<i>Means of Support</i> Quote indicates that BC provision offers a means of support to the family on a morning.	<i>Positive Start</i>
"I've had kids where I've said actually pulled them aside and said look you had anything to eat this morning and have been known to send kids off to the kitchen to get something"	<i>Excluding Children</i> Quote suggests that even though a breakfast club is available, children are still arriving at school having had nothing to eat	<i>Means of Support</i> Upon second reading it is evident that this quote does not fit in with the code description.	<i>Positive Start</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I don't know, I suppose the staff some of them- the staff who run it, it would make an impact on their lives cos obviously they've got to be at school early or whatever"	<i>Not Coded</i>	<i>Practical Concerns</i> Quote highlights the practical concerns that the interviewee has for BC staff.	<i>Practical Concerns</i>
"If there was no breakfast club I know for a fact there would be a selection of children in our school who wouldn't get anything"	<i>Breakfast Meal Provided</i> Staff member suggests that breakfast club is helpful in allowing some children to have breakfast who would otherwise go without	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"Sometimes parents are just too busy I know that sounds awful but the parents who work would rather leave their children having an extra bit of sleep that they would need during school and then take the kids to breakfast club than erm you know getting them up half an hour earlier to make sure they breakfast"	<i>Positive Start</i> Quote suggests that morning routines are less pressured when children are able to attend breakfast club	<i>Means of Support</i> Quote indicates that breakfast offers a means of support for working parents.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Those kids who wouldn't get breakfast would be disruptive erm because they're hungry or erm withdrawn"	<i>Breakfast Meal Provided</i> Staff member discussed what would happen if breakfast club closed down and suggested that there would be some children who would not get breakfast thus highlighting the importance of the breakfast meal provided	<i>Means of Support</i> Upon second reading it is evident that the quote does not fit in with this code description. However, it could also be coded under <i>Positive Start</i> in reference to the interviewees comment about classroom behaviours of children who have not eaten.	<i>Breakfast Meal Provided</i>
"Parents would struggle especially one of the girls whose mum works erm would struggle to get her somewhere else so then she'd be more hassled of a morning so if you're more hassled on a morning before you come to school that's gonna disrupt your whole day"	<i>Positive Start</i> Quote suggests that breakfast club provides children with a more settled start to the school day than they would have otherwise	<i>Means of Support</i> Quote indicates that BC offers working parents a means of support.	<i>Both codes fit equally well</i>

## Appendix G (continued): Coding discrepancies and resolutions for Study 1a

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"They genuinely like it from what I can gather they like seeing the kids first thing on a morning making sure they have something nice"	<i>Positive Start</i> Staff member mentioned that the breakfast club staff enjoy breakfast club thus it provides a positive start to their day	<i>Not Coded</i>	<i>Positive Start</i>
"She has the big mother thing she loves it she loves making sure all the kids have got enough"	<i>Means of Support</i> 'Big mother' suggests that the breakfast club staff member takes on a caring role	<i>Social Opportunities</i> Quote indicates that this particular member of BC staff creates a friendly. environment	<i>Means of Support</i>

## **Appendix Hi: Example transcript from Study 1b- Parent**

**Interviewer:** So can you just tell me about your child's attendance at school breakfast?

**P1:** Well my child has got 100% attendance last year and she's so far this year not missed any days of school so every morning she's here on time urm for the breakfast so she- she has it every day

**Interviewer:** Does she have breakfast at school everyday?

**P1:** She- she does yes she does have it at school as far as I know she has milk she's participating in the free milk as well urm and she helps herself to all the breakfast items that she likes so yes she is at the moment

**Interviewer:** Right does she have breakfast at home as well?

**P1:** Yes- yes she does

**Interviewer:** What kind of things does she have?

**P1:** She has cereal every morning for breakfast, week days because we're both out at work my partner and I- my husband and I we work full time so both children- I've got a child at nursery who's four and so it is quite a rush and they tend to have cereal during the week but we have other things during the weekends when we've got more time

**Interviewer:** Ok urm what difference does the school breakfast make to your morning routine?

**P1:** There's no difference at all because urm because I work in school as well I'm here before school starts so is my daughter so it hasn't made- really made an impact on the fact that some children are getting here more on time because they want to participate in the breakfast urm but urm you know she does talk about what they've had she also helps me get my- mine sorted for the children who are with me in the morning as well yeah she does always want to come and see what it is she's very keen to have a look

**Interviewer:** Good urm what does your child gain from attending school breakfast?

**P1:** Urm well I would say it's more social for my child personally because I know she's had a good breakfast at home so what she's gaining is just sitting with her- with her peers and talking you know they might have you know a time to chat while they're eating but I wouldn't have said it has any other impact really on her

**Interviewer:** Ok urm have any issues arisen with your child in relation to her school breakfast attendance?

**P1:** Yes I would say she's put on weight since she's had it since after Christmas me and my husband have been concerned while we don't want her to miss out on you know taking part in that breakfast urn or that social- because it has become sort of a group situation the children are encouraged we are a bit worried that she seems to be putting on weight and it seems to be since the breakfast has started because if there's food in front of my child she'll- she'll eat it you know she'll take part in it and she won't refuse it even though she's had breakfast at home and we are concerned about that I don't think that she needs to have all that food necessarily as well as having breakfast at home and to be quite honest if the choice was given to stop it I would say no I don't want her to have it maybe have the fruit because I know in year two at the moment they don't have access to the free fruit scheme like they do in year one and reception but urn I'd probably say yes have a piece of fruit with your milk cos you're getting milk every day but the cereal bars urn and the other things you know I just think they might be- they're full of sugar the fruit juice is full of sugar as well and even though they're sort of designated as healthy I am worried that she's putting on weight that she has noticeably put on weight and her habits at home and her eating at home hasn't changed so I'm assuming it because of the breakfast this extra food that she's having so you know it's a little bit of a worry

**Interviewer:** Yeah it's understandable urn is there any reason if you don't mind me asking why you would choose to give her breakfast at home if she's gonna have breakfast at school as well?

**P1:** Because I am from sort of an old school we all eat breakfast you know together as a family at the table and we always have done and urn it's our routine in the morning and also I know that certain times the children don't get their breakfast straight away when they come to school it might be a different time in the morning because of assemblies things like that happening I know that sometimes they don't always get it straight away and personally if I don't eat my blood sugars down I get headache and you know that's something that I worry about I want my children to leave my house I feel it's my responsibility that they've had their breakfast at home and breakfast at school while it's- I can see the benefits for children who don't have breakfast at home on a regular basis for whatever reason their family circumstances I feel that as a mother I should be providing breakfast for my children before they go to school and that's you know but then you've got the social side you've got the stigma of oh well my child's not having breakfast at school cos she might be the only one and you don't want her to miss out on the social side urn but like I said before if there was an opportunity to say yes or no I would probably say no to fruit juice, no to cereal bars and just say you can have one piece of fruit with your milk at school which you know is what is healthy what she should be having I think I don't think she needs anything else



**Interviewer:** Right that's great urm you've mentioned some of this already when you mentioned about the social aspect but if there's anything else you want to add what are the positive aspects of the school breakfast?

**P1:** Urm for my child it's- it's really knowledge about you know healthy- what's healthy to have what- it's- it's good to have healthy food that it gives you energy and it helps you set up for the school day but obviously there is that confusion there with the fact that she's already had it at home urm like I say I don't think I can think of any other positives other than the social aspect really because she's already had it at home you know there's no other health benefits for her in fact I would say there's negative health benefits from her having too much to eat in the morning urm and I've actually reduced the amount that I put in her packed lunch at lunchtime because of that as well so she might not get her fruit you know two pieces of fruit she might just have one in her packed lunch she might not have fruit juice it might be low sugar juice that she's having there because of those things because I know what she's eating over the school day

**Interviewer:** Right I see it's really interesting again this touches a little bit on what you've already mentioned but if there's anything else you want to add what could be done to improve the school breakfast?

**P1:** Erm less- less choice maybe I don't know. I know there's certain things that have been stopped because they weren't popular but less choice of food for the children who- it's hard because you know you've got to obviously have parents say so that they're having breakfast at home but for me if I'm honest I would rather my child just have one piece of fruit offered to her for breakfast no fruit juice just water because I know she's having milk at school and I know they're allowed water all day every day whenever they want it I would prefer her to be just given an option of having a piece of fruit so for my child personally less- less food would be the improvement I would say so just offer fruit one piece you know for the breakfast urm and that would obviously then have to be communicated to parents so I think you should be given an option to opt in to certain parts of the breakfast or opt out completely or opt in to it all but it would avoid wastage as well you know and I think- I think my child maybe like others is eating it because it's there so it's like it's not really training them to stop when they're hungry- when they're not hungry sorry they're eating it because it's there and other people are eating it and they sort of like grab it grab it grab it you know while it's there but it's not necessarily the most healthy thing to be doing if you know what I mean because if they're already full because they've had breakfast at home they need to sort of show a bit of willpower say no I've had mine and not indulge- over indulge because like I say she- she has put on some weight and we can't think of any other reason why because her eating habits at home haven't changed so-

**Interviewer:** Erm as a parent than how much information were you given about the school breakfast scheme

**P1:** It's a hard question that because I work at school I sort of knew quite a little bit more I think as a parent it's very much you're asking your child what have you had this morning what breakfast because I don't think parents have had a list of items that the children are getting to my knowledge it was just a case of saying which things are popular if things aren't as popular we'll stop them and if you know if things are popular we'll keep them on you know but because I work in school I sort of got a bit more information than perhaps I would have done erm and there was something mentioned about after the holidays having an opt out letter sent out but as yet that hasn't happened so it's still at the moment carrying on with everybody having the option to have everything so I'm waiting really for the opt out letter to come so then I can express my views a little bit more as a parent so yes it's you know it was in the local press I know that and it was on the local news the North West news um about the scheme but you know if you don't read the paper and you don't watch the news then I think mainly it's come from the school and the news- the weekly newsletter that's come out so but erm and you know the children obviously if you talk to your child about it then you find out quite a lot from there so-

**Interviewer:** Um that's interesting um how would things change for you and your child if the school breakfast was stopped altogether?

**P1:** No there would be nothing that would change for me at home my routine- breakfast routine would stay the same at home I think the only thing that would change would be that if the breakfast stopped totally then I would be providing my child with a- a piece of fruit to bring with her in the mornings with her to have with her milk because I know she's getting free milk that's part of a different scheme but I know that in year two the free fruit- the Government free fruit stops so they don't have access to fruit um because at the moment reception and year one have milk and free fruit as part of a separate scheme and they have breakfast as well as fruit and whatever but in year two they don't have the free fruit so I'd probably just send her in with a piece of fruit so I know – or put more in her lunchbox again so I know then that she's getting her five a day but the routine at home would not change at all

**Interviewer:** Ok. Again this is something that you've mentioned but if there's anything else you'd like to add there've been suggestions in the media that parents should be serving breakfast to their children at home and the responsibility shouldn't be put onto schools what do you think about that?

**P1:** Hmm well as a parent my view is that like I say I like to be able to give my children breakfast in the morning that's part of our family routine it always has been and I think it's my responsibility but I understand that some parents or you know some family set ups mean that that doesn't always occur so I think for the children who don't have breakfast in the morning at home then the scheme is a good scheme because they need you know they need to have that set up in the morning so that they can

have the maximum opportunity to learn because they're not hungry coming to school they're not thirsty um and you know they'll be happier in themselves and I just think breakfast to me as a person always growing up I always knew that breakfast was the most important meal of the day that's what we were taught when we were younger you know so it doesn't really come into my um- into my um head that I would not send my child without breakfast and myself I would not come out of home to work without having breakfast because I wouldn't feel right during the day but I think for some children it is important to have I understand that there are some children that need to have that so you know I'm not going to um express views on what other parents are doing or their set ups they're all different so there is a place for it I think

**Interviewer:** That's great um last thing is there anything else that you'd like to mention about the scheme that you haven't mentioned already that you think's important?

**P1:** Um probably just that maybe parents need to be a little bit more aware of- of what exactly their children are being given you know the products I know they're getting breakfast in inverted commas but maybe a little bit more communication of what it is they're actually eating and drinking on a daily basis maybe a menu or something that they can take home and know that that day or that week they're going to have these certain things available you know not like down to the letter but maybe this week we're gonna offer this, this and this that would be- like we do school dinner menus something similar to that because I think that's the only thing I would say that perhaps parents haven't had um they've had you know a letter saying that it's gonna start the scheme's gonna start but not really- if your child's one who comes home and says oh what have you done today at school oh nothing or they don't give you much information then or they can't remember what they had first thing in the morning it might just help them

**Interviewer:** Right that's great thank you very much

### **Appendix Hii: Example transcript from Study 1b- Child**

I: Right to start with then can you just tell me about school breakfast?

C1: it's really nice and we get it every morning. We get a drink and we sit down and eat it...

I: Mm..?

C1: But like sometimes you don't like it, sometimes you do.

I: Right! So what kind of things can you get at school breakfast?

C1: You can get like so...a piece of bread with fruit in it, you get a drink and some grapes and you... and we eat it until assembly, but if we're not in we put it to the side for the people and if they're late then they can eat it at break time.

I: Mm. And what is your favourite thing to eat? At breakfast?

C1: The bread with the fruit and then some... I eat some apples and grapes.

I: That sounds lovely. Is there anything that you really don't like?

C1: The breakfast bars.

I: Right.

C1: And that's it.

I: What is it that you don't like about them?

C1: Don't know...

I: You don't know. Funny taste. Erm, what do you have to drink?

C1: Apple juice, orange juice, pineapple juice...

I: Right, and what do you pick?

C1: Erm, all of them sometimes, but every day we take a choice like today we had orange juice, yesterday we had apple juice and tomorrow probably pineapple juice.

I: I see. Brilliant. Erm, do you have breakfast at school every morning?

C1: Yeah.

I: Is there any reason? That you have breakfast at school...?

C1: No, it helps the people save money , cause you just come into school and have your breakfast and if we haven't had it at home coz we've been in a rush we just have it in break...in school.

I: Brilliant. So, who saves money then?

C1: Your mums and dads. (giggles)

I: Right. I see. Do you have breakfast at home and at school?

C1: Just at school

I: Just at school.

C1: yeah.

I: So let's think about how going to your school breakfast makes you feel in the morning... Does it make you feel any different?

C1: It makes me feel like happier in the morning, it gets me doing my work quicker and easier.

I: Mm. Wonderful! And when you're at home...so...on a weekend...when you're not at school... Do you have breakfast then?

C1: Yeah.

I: And what kind of things do you like to have for your breakfast?

C1: I like to have sugar puffs and toast and cereal.

I: Wonderful! Does coming to school breakfast make a difference about how you feel about coming to school?

C1: Yeah, it makes you want to come into school cause you know all your friends are having fun in the morning.

I: Wonderful! Is it quite fun then to have breakfast with your friends?

C1: Yeah, mm.

I: I see, what do you like about that then?

C1: Because you get to talk and see what they like and then, and on like their birthdays or something you know what they like ...

I: Right, that's brilliant. What would you say is your favourite part about coming in and having breakfast at school?

C1: Cause it helps me learn more in the morning cause sometimes when you don't have it you just go grumpy...in lessons.

I: Right, I see! So, what makes you grumpy if you haven't had your breakfast?

C1: Because you're hungry all the way through the lesson.

I: I see, so if you have your breakfast at school, does that make you less hungry?

C1: Yeah, and at break we get "Tuck shop"

I: Oohh, that's good, what do you have at tuck shop?

C1: Two crack and a DairyLee...we all get some oranges and fruit...

I: Lovely, so having your breakfast makes you not hungry until break time.

C1: Yeah...

I: Wonderful. Now, thinking about school breakfast, what do you think could be done to make it even better than it already is?

C1: Right, put like toast and cereal in it as well.

I: I see, you would like toast and cereal.

C1: Yeah

I: Right, brilliant. What would happen if they took school breakfast away? So you couldn't come anymore...

C1: Everyone would be grumpy every morning and some people won't come in. To school.

I: Right, you think they wouldn't come to school if there wasn't school breakfast?

C1: Yeah, cause they'll be grumpy all day and sometimes they go in a mood.

I: Right, and what would you do in the mornings before school if you didn't have school breakfast?

C1: I would have it at home.

I: Right, you'd still have it at home.

C1: Yeah, but I will have to rush and get ready and everything.

I: I see.

C1: Before I have it.

I: So...is it a little bit easier for you to come in?

C1: Yeah, it's a little bit easier cause it makes you come in earlier.

I: I see, that's lovely. Ahm, I think that's all I wanted to ask you about – school breakfast, but is there anything else that you would like to tell me about school breakfast that you think is really important?

C1: That every day it would be nice if they like changed the drinks and stuff.

I: Oh, OK. If you changed the drinks so...do you have the same drinks every day?

C1: Not the same but change it...but half of us don't like pineapple juice.

I: Right, so what would you like instead? If you could choose the drink...

C1: Apple juice I can...

I: Right, so...do you mean on a Monday you might have orange juice then on a Tuesday...

C1: Then apple juice, then orange juice, then apple juice...

I: I see, so some days do you get pineapple juice and you don't like it?

C1: Yeah.

I: So what do you have on days that there's pineapple juice?

C1: I drink it anyway (laughs).

I: You drink it anyway even though you don't like it (laughs). So it could be better if you had different drinks.

C1: Yeah.

I: Right, is there anything else that you'd like to say?

C1: No.

I: That is brilliant, you've told me so much.

### **Appendix Hiii: Example transcript from Study 1b- School Staff**

I: Ok then to start with can you just tell me generally about your school breakfast?

S1: The way it's running at the moment?

I: Yeah

S1: Erm we have the kind of things that the children have at the moment they're having a carton of juice, they're having a bag of fruit like the little fruit bags you can buy from Tesco those kind of bags erm and they're having a bread product of some form. The kitchen staff are being very good our cook is actually organising all of this and she's monitoring what she gets the most waste from so the bread products that the children don't like she's going to stop doing, she's also going to personalise it to the different classes so for instance if year four never eat the bagels then she won't give bagels to year four but she would still give them to year two if they liked them so she's being very flexible. I think if the kitchen staff weren't doing it it would be a total nightmare but the school catering service have taken on responsibility for it and Blackpool obviously decided that so they're getting a bit of extra funding to pay for extra staff to do that. It's not a lot of funding I think it's just a catering assistant for one hour a day but its sufficient. They deliver all the food to the classrooms on a trolley erm they deliver it first thing in the morning and the children at our school can come in from twenty five to nine, they've actually got to be in by quarter to nine so assembly then starts at five to nine so if a child arrives at twenty five to nine and then they've got twenty minutes to eat their breakfast erm if they arrive just around about quarter to nine then we say to them you don't have time to eat it now but we'll save it for you and then have it at playtime so they are still having it, if they arrive late then we save it for them as well so they get every child gets it if they arrive some time during the day erm we've got a nursery class who the morning children do get their breakfast but obviously the children who only do afternoons don't get it as far as I'm aware at the moment that's not caused any problems because we did anticipate maybe some parents might say in the afternoon oh it's not fair my child's not getting it but luckily they haven't erm the children eat the breakfast in the classroom what I would have liked to have happened really would have been for them to be able to have what I consider a proper breakfast of cereal and toast but that was just totally impractical because you couldn't do that in the classroom because of the mess issue you would have to have all the bowls washed up. We couldn't do it in the school hall because we would have had to set it up with all the tables and then as I said assembly's five to nine there wouldn't have been the time to get cleaned up and put away so that's a bit of a disappointment to me that what they are getting is ok and it is something healthy in that it's fruit but it's not quite what I think of as breakfast

I: That's really interesting! Is there any reason why you would have preferred if the opportunity was there to have cereal and toast rather than what they are getting?

S1: Just because I feel it's more appealing to the children I think er we do have flexibility so I am a little bit concerned about the cartons of juice



because it's orange juice or apple juice on the child's teeth for the rest of the morning but there is flexibility and if I wanted to I could ask not to have that we could have water and I know that some schools are actually having the bottled water which the children then can keep and have on their desk throughout the day but I want to just see how the children feel about it really before I make that decision because I don't want to take something away from them that they're really enjoying and it is giving them vitamins so we'll just see how it pans out really on the juice erm to me breakfast would be something a little bit more substantial and it would be something at least warm erm we do have our own breakfast club but it's not a pay for breakfast club it's not a child care one when you arrived and were waiting in the children's centre cafe there and that cafe opens at eight o'clock and the children can come in and buy toast or cereal things like that there so we do have some children who still come and do that first thing in the morning and I was talking to them yesterday and I was asking if they would then not have their breakfast in the classroom but they said yes they would have that as well

I: I see, so they're doubling up on their breakfast?

S1: Yeah they are but I don't mind because they're in they're in on time they're in early and they're well fed erm I think that's it on that one

I: Erm can I just go back to something you mentioned about the food erm you mentioned bread products what kind of bread products are there?

S1: I think the kind of things that we've been trying are malt loaf, bagels of various different flavours erm I've seen I think some bread rolls at one I think they still have breakfast bars occasionally I know that they're trying to phase those out but when it first started we had those low sugar Alpen breakfast bars but people do feel a little bit unsure about those because breakfast bars do have a bit of an unhealthy reputation so I'm pretty sure that they're trying to phase those out anyway I can't think of any other ones just off the top of my head I think the ones the children seem to like best are the bagels but again it is variable

I: Yeah and thinking generally about the food and drinks that are served is there anything in particular that's quite popular or anything that they don't like so much?

S1: I know that they like the fruit bags because we try to encourage them to have the bread product first then if they haven't managed to finish the whole breakfast they can put the fruit bag in the drawer to have at play time and that way we know that they're kind of fuller with the bread thing first thing in the morning but children being children they eat what they like best first and you know you don't want to interfere too much I think as I said before I think the bagels are quite popular but again it's the cook in the kitchen really who would know more about that I've not asked her recently

I: Okay erm thinking about the breakfast scheme in general in your school I know you said children are coming in at the time they would come into school but is there any particular reason that you think children are coming in for the breakfast at school?

S1: Erm the children I think what I mentioned before really is the children who prefer to come into the cafe they're still doing that I'm not sure that the free breakfast is actually getting children into school it's definitely not getting them in any earlier definitely cos we've still got exactly the same lateness that we had before I don't think that it's actually enticing them I think if they were sitting at home thinking oh I don't feel like going to school today I'm going to pretend I'm ill I don't think the thought of having breakfast is going to make any difference to them I don't think it's a draw to get them into school particularly I think it's just a nice thing for them to have when they're here

I: I see erm you've touched on this already then er what difference do you think that school breakfast makes to the children who attend?

S1: None er to their attendance?

I: To the ones who come in and have breakfast what difference do you think that makes to the children who are coming into school and having breakfast?

S1: Erm the teachers have told me that the children do seem to have better attention we don't have any figures or anything that I could say definitely about that it's just their feelings really I think the teachers certainly feel happy that the children are not hungry we did have children who said to us before this that they were hungry in fact just before it was launched the week before it was launched I had two children who said to me within three days I've not had my breakfast I'm hungry and one of them said I haven't had my breakfast cos my mum had no money to buy it so we are in that kind of area it's an area of great disadvantage and I know there were children coming to school hungry so it certainly makes us feel better that we're doing something about that that we don't have children sitting there hungry erm as I say I don't have any hard and fast figures or any concrete evidence about their attention being any better but maybe when you talk to the teachers they'll be able to to give you more of an idea of that cos they're the ones who are working with them during the day

I: Uh-hum that's great. What difference do you think school breakfast makes to the parents?

S1: I've not had an awful lot of feedback I did put a question on our website and invited them to respond as to what they felt about the free breakfast and I only had one parent who responded doesn't surprise me erm and the lady who responded said it didn't actually make any difference to her children because she still likes to give them breakfast at home so it's just like an added extra if they want it when they come to school erm I haven't really had any other parents say anything to me about it but again the teachers might have had people saying things on the door step as the children are arriving I don't get any strong feeling from the parents either way whether they think it's a really good thing or a really bad thing but maybe it's early days and I've just not come across that many who've felt the need to say it to me yet

I: Uh-hum and what about the school and the staff does it make any difference to the school and the staff having the school breakfast scheme running?

S1: I think some of them can see... there isn't a massive down side to the organisation because as I said the school kitchen are doing they're making it all they're putting it all together they're delivering it to the classrooms and then taking the waste away while we're in assembly but I think just the fact of trying to get the children sat at their tables and eating their breakfast does put a little bit more of a burden on it's not huge they'll tell you themselves if they think it's a burden and I think whatever burden they did feel I hope it's outweighed really by knowing that the children are all fed

I: Right that's great erm there've been suggestions in the media that parents should be giving their children breakfast at home and responsibility shouldn't be put onto the school, what do you think about that?

S1: I think that's an ideal world and we certainly don't live in that world and yes there are parents who like the one I just said who responded on the website they sit down at home and they all have breakfast together and that's the ideal and I think parents that did that before will still do that but this is like a catch all isn't it to make sure all the children have got something inside them so yes in an ideal world parents would be responsible but the facts are that they're not doing it not all of them a small percentage of them but enough for in my point of view in this school in this area it's definitely worthwhile doing

I: Uh-hum erm you've touched on some of these as we've gone through but if there's anything else to add what do you think the positive aspects are of the breakfast scheme?

S1: Giving the children a healthy thing to eat first thing in the morning, benefits for their health, benefits for their attention in school those are the benefits as far as I see it

I: Brilliant erm again you've mentioned some of these but what could be done to improve the breakfast scheme?

S1: Erm I am a bit worried about the juice, I do you see it's a funny one cos if you give them water and not juice some of the children won't bother drinking it, you're also cutting out one of their sources of vitamins even though they are getting the fruit portion as well erm I think the way it's working for this school at the moment there's not an awful lot that I would say that we could do to improve it I think the cooks role around finding out which things are popular and not popular is going to be vital really in cutting down the waste, from an ecological point of view the cartons can't be recycled at the moment but I know they're looking into a kind of carton that can be so you're always a bit uncomfortable when you're creating waste that can't be recycled. In an ideal world we would have some kind of separate room that was big enough for as many children that wanted to come in where we had enough staffing and enough time to be able to do them toast and cereal but I appreciate that that would be an ideal world and I don't know how that could ever actually happen in reality so under the

constraints of timetable and environment and staffing I don't really think it could be done any better

I: Right, seeing what you've seen then of your breakfast scheme if the opportunity came along that you could serve cereal and toast how much additional time do you think that would add on to the scheme?

S1: I think it would add quite a lot of time on we'd have to have the school kitchen staff doing it and whether they could do it with the staffing time that they've been allowed for this now I think is quite doubtful really they'd have to be constantly they'd have to have I think they'd have to have three staff in to do it really

I: Ok and what are you at at the moment?

S1: At the moment there are just two so the cook that's in at that time anyway so she's as far as I'm aware she's not being paid any extra because it's her working hours anyway and one of the other kitchen staff is coming in an hour early to do it

I: I see so quite a bit of additional time for you to change

S1: Yeah

I: Right the last thing I'd like to cover is what you think the impact would be if the breakfast scheme was taken away erm so for pupils what would you say the impact would be for pupils?

S1: Well they'd be back to square one with hungry children sitting in school erm if we knew they were hungry we didn't actually leave them to stay hungry but you're relying on children actually saying I've not had any breakfast I'm hungry and a lot of them I'm sure would sit there regularly feeling hungry but just not saying anything so we'd be back to that situation. Parents I suppose the longer this goes on the more dependent they get on it and it may be that now we're having some parents in fact somebody has said I couldn't tell you which parent but somebody has said to me that before they used to have a rush to get to school in the morning because they had to give them their breakfast but now they can come in a more leisurely way cos they know they don't have to give them breakfast at home they get it when they're in so that kind of parent will be becoming more dependent on this breakfast scheme and if that's taken away again then you know they'd be back in that situation

I: Uh-hum and what about for the school and the staff could you see an impact for the school and the staff if the breakfast scheme was taken away?

S1: I think if the staff when they speak to you say that they have noticed attention in the children is better I mean there is one particular member of staff who has told me that erm then I think they would be quite upset to see it stop really because they'd know that they were back in the situation they had before where the children would be a bit distracted or just not able to concentrate sit still and listen I think they'd be back in that situation so they wouldn't be particularly happy.

I: Right and previously before the scheme erm have you had children who've come in who hadn't had any breakfast would you have provided things for them?

S1: Yeah yeah we did

I: Ok erm just before we finish is there anything else that you'd like to mention about the scheme that you haven't had the opportunity to say?

S1: I think of probably said a lot actually I don't think there's anything I've missed

I: Ok that's fantastic, brilliant thank you very much

**Appendix I: Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Breakfast Meal Provided</b>	<b>Variety of breakfast foods available</b>	<i>"They get things that perhaps they wouldn't get at home sort of like we wouldn't give a bagel for breakfast you know so there are some things in there that are new which is good"</i> (Mother of 4 children)		<i>"I like it because it's always yummy"</i> (Girl, aged 6 years)  <i>"School breakfast is not just the same thing everyday"</i> (Boy, aged 9 years)  <i>"It has some stuff that me and mummy don't have"</i> (Girl, aged 6 years)

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Breakfast Meal Provided</b>	<b>Breakfast skipped at home</b>	<p><i>"I am from a sort of an old school we all eat breakfast you know together as a family at the table and we always have done and erm it's our routine in the morning"</i> (Mother of 2 children)</p> <p><i>"I think it's a good idea this breakfast thing especially if children aren't getting fed at home at least you know they're getting something down 'em"</i> (Mother of 2 children)</p>	<p><i>"It defies belief how many children just don't have breakfast in the morning, in some cases it actually makes me quite upset because a lot of the children come in and you can tell they've not had breakfast and they've probably not had breakfast for days"</i> (Class Teacher)</p> <p><i>"For those that don't get it at home yeah it's brilliant because we've actually brought food in before now"</i> (Teaching Assistant)</p>	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Breakfast meal provided</b>	<b>Children more willing to eat school breakfast</b>	<p><i>“One of my children doesn’t particularly- she’s not a morning eater erm so it’s great for her”</i> (Mother of 4 children)</p> <p><i>“The really really good thing is they’ll drink milk here, they don’t like drinking- it has to be a milkshake at home”</i> (Mother of 5 children)</p>		
	<b>Healthy options available</b>	<p><i>“He had a Fudge then he had a Freddo and then he had some sweet cigarettes and obviously that was his breakfast and I’ve seen children before now eating crisps”</i> (Mother of 3 children)</p>		



**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Prepares children for the school day</b>	<p><i>"I think they learn more because they've got what they need inside them" (Mother of 5 children)</i></p> <p><i>"I think educationally the class functions better because all the children they're starting on a level playing field they've all got something in their tums they're not gonna be there hungry they're not gonna be getting tired so they can all contribute better" (Mother of 5 children)</i></p>	<p><i>"They seem to be more alert in lessons they seem to be able to concentrate a little bit more on their work straight away rather than saying that they're hungry" (Class Teacher)</i></p> <p><i>"I couldn't say oh yeah you can tell they've had breakfast this morning because they're performing much better or they've not had breakfast because they're a bit sluggish I've not noticed any difference at all" (Class Teacher)</i></p>	<p><i>"It does- gives me more energy and helps me think" (Boy aged 10 years)</i></p>

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Calmer start</b>	<i>"It's a lot easier cos like if you're in a rush you don't really have to really think about breakfast it's a lot easier"</i> (Mother of 4 children)	<i>"I think it's convenience now for some of the other children so it makes morning routines a bit quicker gets them off to school a bit quicker if they can eat their breakfast at school rather than at home"</i> (Class Teacher)	<i>"If we haven't had it at home coz we've been in a rush we just have it in break...in school"</i> (Girl aged 11 years)

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Helps punctuality</b>		<p><i>"Some parents were struggling to get them up and dressed and ready for school and breakfasted and at school on time so it's also been a bit of an incentive for them to come to school on time cos they get the full breakfast so some of my ones that were persistently late are now coming on time because they want their breakfast"</i></p> <p><i>"It's definitely not getting them in any earlier definitely because we've still got exactly the same lateness that we had before" (Head Teacher)</i></p>	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Positive Start to the School Day</b>	<b>Helps punctuality</b>		<i>"I think erm the children that seem to need it the most are the ones that obviously they have a bit of a rush in the morning to get to school and sometimes they're the ones that are late anyway so they do have to wait 'til playtime but at least they're getting something at some point in the morning"</i>	
<b>Time for informal interaction</b>		<i>"They have that extra five minutes chatting with their friends while they eat their breakfast and they all love that"</i> (Mother of 1 child)	<i>"They really enjoy sitting there having an extra bit of a chat with their friends as well the social side of it is very nice"</i> (Class Teacher)	<i>"The best thing about eating breakfast for me-like you sit on the table with your mates"</i> (Boy aged 9 years)

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Exceeding Expectations</b>			<i>"I thought it would be a lot more erm troublesome I thought it would take up more time I thought staff would be you know- children coming late into class and still eating when they come in so erm we kind of envisaged more problems than there has been"</i> (Class Teacher)	
<b>Food Issues</b>	<b>Poor nutritional standards</b>	<i>"The breakfast that I give her at home I think has got less sugar in than the one at school cos she tells me she has like malt loaf and she has the cereal bars whereas if I give her breakfast at home I know what I'm giving to her"</i> (Mother of 3 children)	<i>"I do have a concern about the amount of sugar and fat and things in some of the things that we're giving them when you read the ingredients even though we're giving them the best we can possibly get I still think there's a bit too much sugar and fat in there"</i> (Class Teacher)	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Food Issues</b>	<b>Too much food</b>	<p><i>"She is a child who's prone to putting on weight so we've kind of made a conscious decision that she doesn't need- I haven't said that to her we are sort of trying to guide her into she doesn't need to have two breakfasts"</i> (Mother of 2 children)</p> <p><i>"I do consciously give them a smaller portion of something and they also have a smaller lunch"</i> (Mother of 5 children)</p>	<p><i>"You've got children that are eating at home then having another breakfast and then are having extra again at break time so they're having like three lots and then they bring their own fruit in for snack time as well and then it's not too far to lunch so they're grazing most of the morning on food"</i> (Teaching Assistant)</p> <p><i>"We have a lot of waste there's a lot of stuff thrown away"</i> (Learning Mentor)</p>	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Food Issues</b>	<b>Too much food</b>		<i>"None of the milk was dated long enough to go over half term so we did have quite a lot left over and we decided to give that to parents for children during the holidays"</i> (Teaching Assistant)	
	<b>Food improvement</b>	<i>"I'd rather see her have a bit of toast and a bit of fruit, maybe some milk, that's my idea of a healthy breakfast"</i> (Mother of 1 child)	<i>"They don't like the pineapple juice, we think it's because it's too strong"</i> (PE Co-ordinator)	<i>"I do like sour things but not pineapple cos they touch my tongue and they make my tongue sour, and they don't really feel nice"</i> (Girl, aged 6 years)  <i>"If we are going to have breakfast, we should have, I think that we should have something more ... a bit more breakfasty like cereal, than just bread"</i> (Boy, aged 10 years)

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Lack of Parental Input</b>		<p><i>"All I know is that they get their breakfast before- I think it's while they're having the register but we've not been told what it is or anything only off the children so we've not been told what they get"</i></p> <p><i>"I think you should be given the option to either opt in to certain parts of the breakfast or opt out completely or opt into it all" (Mother of 2 children)</i></p>		



**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Costly Scheme</b>		<p><i>"For me I think it's a great deal of money being spent on something that could be better spent elsewhere"</i> (Mother of 2 children)</p> <p><i>"I think you need a sponsor off certain cereal companies or- I think that would help"</i> (Mother of 1 child)</p>		

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Difficult to Target Support</b>		<p><i>"You get the ten percent of people here and I've heard them on the TV right oh we don't- this woman from [local school]- we don't have time to feed our kids breakfast in the morning and I'm like hello you're their parents you know where the hell are Social Services comes to mind!"</i> (Mother of 1 child)</p>	<p><i>"I think they should look at maybe schools that require the full option and schools that don't need the full option and look at the free school meal aspect and see whether all this food coming into our children is actually necessary"</i> (Assistant Head Teacher)</p> <p><i>"I think it could be that they opt in and out if they do require a breakfast or not but then you've got the issue where some parents would be too proud and say no it's fine we won't have one either it is a catch twenty-two"</i> (Teaching Assistant)</p>	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Temporary Scheme</b>			<i>"Parents now at this school they've got into the habit of their children being fed haven't they for half a term, half a term and one week and er those parents are now gonna have to start thinking again about providing breakfast for the kids and those children from deprived backgrounds that weren't getting breakfast anyway won't get it"</i> (Teaching Assistant)	

**Appendix I (continued): Example quotes illustrating themes from Study 1b.**

<b>Themes</b>	<b>Subthemes</b>	<b>Quotes from Parents</b>	<b>Quotes from Staff</b>	<b>Quotes from Children</b>
<b>Facilities Need Improvement</b>			<p><i>"It does take away learning time in the morning though because when you're trying to get them ready usually we'd be using that fifteen minutes for maths or for English, catching up on previous activities or even assembly so now that fifteen minutes has to be fitted in somewhere else"</i> (Class Teacher)</p> <p><i>"I think the idea of maybe putting them somewhere for their breakfast in the morning is a good idea. Having it in the classroom where it's a learning environment I don't think that's doing us any favour"</i> (Class Teacher)</p>	

**Appendix J: Coding discrepancies and resolutions for Study 1b**  
**Quotes from Child**

<b>Quote</b>	<b>Principle Investigator Interpretation</b>	<b>Second Coder Interpretation</b>	<b>Resolution</b>
"You can get like so... a piece of bread with fruit in it"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Child provides information on the food items they can choose at breakfast club.	<i>Breakfast Meal Provided</i>
"If we're not in we put it to the side for the people and if they're late they can eat it at break time"	<i>Breakfast Meal Provided</i> The scheme is inclusive and ensures all children have access to breakfast, even those who are late.	<i>Exceeding Expectations</i> Quote indicates that school breakfast has exceeded their expectations in the respect that they still receive a breakfast even if they don't attend.	<i>Breakfast Meal Provided</i>
"It helps people save money, cos you just come into school and have your breakfast and if we haven't had it at home cos we've been in a rush we just have it in break... In school"	<i>Breakfast Meal Provided</i> Children can be safe in the knowledge that breakfast is available at school if they don't have time to eat at home in the morning	<i>Positive Start</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Breakfast Meal Provision.</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Child (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Just at school" [In response to the question: "Do you have breakfast at home and at school?"]	<i>Breakfast Meal Provided</i> Although it is not possible to determine whether this child would have breakfast at home if school breakfast was not available, the quote suggests that school breakfast is the only form of breakfast being consumed by this child.	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"It makes you want to come into school cos you know all your friends are having fun in the morning"	<i>Positive Start</i> Quote suggests that the fun of the breakfast scheme is motivating children to come into school	<i>Social Opportunities</i> Quote indicates that the child believes that BC provides them with opportunities for socialised with their peers.	<i>Both codes fit equally well</i>
"I just like have a drink on them"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Whilst the quote does not fit in directly with the chosen code's description, it does provide information about the breakfast items consumed at BC.	<i>Not coded</i>

**Appendix J (continued): Coding discrepancies and resolutions for Study 1b**  
**Quotes from Child (Continued)**

<b>Quote</b>	<b>Principle Investigator Interpretation</b>	<b>Second Coder Interpretation</b>	<b>Resolution</b>
"So I have to absolutely rush for breakfast like I did today"	<i>Breakfast Meal Provided</i> School breakfast did not stop this child having to rush to get to school but the child was able to still get breakfast despite running late	<i>Positive Start</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Breakfast Meal Provided</i>
"More bagels" [In response to being asked what they would miss about if school breakfast stopped]	<i>Breakfast Meal Provided</i> Quote suggests that school breakfast is enjoyable and would be missed if it was taken away	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"I have two breakfasts"	<i>Food Issues</i> There is potential for children to consume a large amount of food in the mornings if two breakfasts are available, which could have negative consequences for children's weight.	<i>Not Coded</i>	<i>Food Issues</i>
"I like eating loads of bread at home. And a bagel's a decent bread"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Child compares the food items available at BC with those at home and provides information on the food items available.	<i>Both codes fit equally well</i>

**Appendix J (continued): Coding discrepancies and resolutions for Study 1b**  
**Quotes from Child (Continued)**

<b>Quote</b>	<b>Principle Investigator Interpretation</b>	<b>Second Coder Interpretation</b>	<b>Resolution</b>
"I get to eat it with my family first and I get to eat it with my friends at school"	<i>Food Issues</i> Quote suggests that children are able to eat two breakfasts, which has implications for excessive weight gain.	<i>Social Opportunities</i> Quote also indicates that BC provides children with the opportunity to eat with their friends.	<i>Both codes fit equally well</i>
"You could have a party as well as you eating your breakfast"	<i>Not Coded</i>	<i>Food Issues</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Not coded.</i>
" Like there's tables set on one little piece"	<i>Not Coded</i>	<i>Food Issues</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Not coded</i>
"Just sing or something"	<i>Not Coded</i>	<i>Food Issues</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Not coded</i>
"It would be fine if I forgot it one day because there's always breakfast at school anyway"	<i>Breakfast Meal Provided</i> Quote suggests that children do not necessarily have to have breakfast at home because they can rely on it being available at school	<i>Temporary Scheme</i> Quote provides info on what the potential impacts of closure of the BC scheme could have e.g. a child having no breakfast if they didn't get it at home.	<i>Breakfast Meal Provided</i>



## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Child (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I'd be mad"	<i>Not Coded</i>	<i>Temporary Scheme</i> Quote expresses the child's feelings should the BC close. Whilst this is not entirely fitting to the code description, it does provide information on the potential impact of terminating the scheme on children.	<i>Temporary Scheme</i>
"There's like drinks there as well"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Quote provides information on the types of food available at BC.	<i>Breakfast Meal Provided</i>
"I'd kinda miss it, cos it's- it's nice"	<i>Not Coded</i>	<i>Temporary Scheme</i> Quote expresses the child's feelings should the BC close. Whilst this is not entirely fitting to the code description, it does provide information on the potential impact of terminating the scheme on children.	<i>Temporary Scheme</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Parent

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"If the choice was given to stop it I would say no I don't want her to have it"	<i>Lack of Parental Input</i> Parent suggests she has no choice in whether her child has breakfast at school	<i>Not Coded</i>	<i>Lack of Parental Input</i>
"I can see the benefits for children who don't have breakfast"	<i>Breakfast Meal Provided</i> School breakfast provision makes breakfast available to those who would otherwise miss out	<i>Difficult to Target Support</i> Quote indicates that the parent perceives the scheme to have benefits for children who don't have breakfast at home. Thereby highlighting the potential need for a targeted approach.	<i>Both codes fit equally well</i>
"you've got the stigma of oh well my child's not having breakfast at school"	<i>Difficult to Target Support</i> Quote suggests that there is stigma associated with a reliance on school breakfast	<i>Not Coded</i>	<i>Difficult to Target Support</i>
"if there was an opportunity to say yes or no..."	<i>Lack of Parental Input</i> Parent feels there is no choice to opt their child out of the scheme	<i>Food Issues</i> In context the parent is stating that they would prefer the option to say yes or no to particular foods such as fruit juice and cereal bars.	<i>Both codes fit equally well</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Parent (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"It gives you energy and it helps you set up for the school day"	<i>Positive Start</i> Suggestion that breakfast provides a positive start to the day by giving children energy and helping them to cope with the demands of the school day	<i>Not Coded</i>	<i>Positive Start</i>
"I don't think I can think of any positives apart from the social aspect really"	<i>Social Opportunities</i> Parent believes the social opportunities afforded to children through school breakfast are the only advantage to attendance	<i>Not Coded</i>	<i>Social Opportunities</i>
"I've actually reduced the amount that I put in her packed lunch"	<i>Lack of Parental Input</i> Quote suggests that parent has to make adjustments to food prepared at home as she is unable to control the food her child consumes at school	<i>Not Coded</i>	<i>Lack of Parental Input</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Parent (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I think you should be given an option to opt in to certain parts"	<i>Lack of Parental Input</i> Parent feels she has no choice in whether her child has breakfast at school	<i>Food Issues</i> In context the quote indicates that the parent would like the option to opt out of certain foods for their child and reduce quantity.	<i>Both codes fit equally well</i>
"As a parent my view is that like I say I like to be able to give my children breakfast"	<i>Lack of Parental Input</i> As mentioned above, parent feels like she has no choice in where her child has breakfast	<i>Not Coded</i>	<i>Lack of parental input</i>
"some parents or you know some family set ups mean that [breakfast] doesn't always occur"	<i>Breakfast Meal Provided</i> Suggestion that school breakfast is useful for providing breakfast to children who would otherwise miss out	<i>Not Coded</i>	<i>Lack of parental input</i>
"They can have the maximum opportunity to learn"	<i>Positive Start</i> Parent argues that the provision of breakfast ensures children are able to learn to their full potential	<i>Not Coded</i>	<i>Lack of parental input</i>

**Appendix J (continued): Coding discrepancies and resolutions for Study 1b**  
**Quotes from Parent (continued)**

<b>Quote</b>	<b>Principle Investigator Interpretation</b>	<b>Second Coder Interpretation</b>	<b>Resolution</b>
"She absolutely loves it"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Upon second reading it is evident that this code does not fit in with the code description.	<i>Positive Start</i>
"It's absolutely brilliant obviously from a lot of children who aren't getting breakfast"	<i>Breakfast Meal Provided</i> Quote suggests that school breakfast is particularly beneficial for children who do not get breakfast at home	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"to be independent to think for themselves what they want to eat"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Quote indicates that BC provides children with the opportunity to make independent choices about the foods they want for breakfast.	<i>Breakfast Meal Provided</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from Parents (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"Well when it first started she had her breakfast because I think she was frightened in case she came and didn't like it"	<i>Not Coded</i>	<i>Lack of Parental Input</i> Quote indicates that the parent had little knowledge of the food types available at BC and colluded with their child's insecurities about BC in providing them with breakfast at home.	<i>Lack of Parental Input</i>
"Sometimes it's really hard if they're not hungry when they get out of bed"	<i>Not Coded</i>	<i>Positive Start</i> Quote indicates that routines may be made easier if children aren't hungry when they get out of bed.	<i>Positive Start</i>
"there are a lot of children who maybe aren't getting breakfast"	<i>Provision of Breakfast</i> School breakfast is useful for children who would otherwise miss out on breakfast	<i>Not Coded</i>	<i>Provision of Breakfast</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from School Staff

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"The kind of things we've been trying are malt loaf, bagels of various different flavours"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Quote provides information on the food types available to the children at BC.	<i>Breakfast Meal Provided</i>
"We try to encourage them to have the bread product first..."	<i>Not Coded</i>	<i>Food Issues</i> Quote indicates that staff may have concerns about the food that children are consuming at breakfast club and may feel that they are negating any perceived negative food choices made by children by persuading them to eat the bread product first.	<i>Food Issues</i>
"I think the bagels are quite popular"	<i>Not Coded</i>	<i>Breakfast Meal Provided</i> Whilst this is not entirely fitting with the code description, the quote does provide information on the most popular food choices for children at BC.	<i>Breakfast Meal Provided</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I've not had an awful lot of feedback"	<i>Not Coded</i>	<i>Lack of Parental Input</i> Quote indicates that despite seeking feedback from parents, they have not received much parental feedback, which in turn would indicate a lack of parental input and knowledge about BC.	<i>Lack of Parental Input</i>
"This is like a catch all isn't it"	<i>Breakfast Meal Provided</i> Staff member suggests that free breakfast ensures breakfast is available to all children	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"they're not doing it not all of them"	<i>Breakfast Meal Provided</i> Suggests that school breakfast is necessary as some children are not getting breakfast at home	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"Giving the children a healthy thing to eat first thing"	<i>Breakfast Meal Provided</i> Quote suggests that children are given healthy food at school breakfast	<i>Positive Start</i>	<i>Breakfast Meal Provided</i>



## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I think it would add quite a lot of time on"	<i>Not Coded</i>	<i>Food Issues</i> In context the quote give an indication of the member of staff's perceived opinion on serving alternative food items such as cereal and toast and their belief that this would be time consuming.	<i>Food Issues</i>
"They'd be back to square one with hungry children sitting in school"	<i>Breakfast Meal Provided</i> Implies that without school breakfast provision, some children would go hungry in the morning	<i>Temporary Scheme</i> Quote provides an indication on the perceived impact that termination of the scheme would have on individual children.	<i>Both codes fit equally well</i>
"There are children who genuinely aren't getting anything at home"	<i>Breakfast Meal Provided</i> Suggests school breakfast is useful as some children do not get breakfast at home	<i>Positive Start</i> Quote indicates that children who don't get breakfast at home are being provided with a food at BC and therefore provided with a more positive start to the day.	<i>Breakfast Meal Provided</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"I have actually had to take giant chocolate bars off children before"	<i>Breakfast Meal Provided</i> Some children have poor breakfast habits outside of school, which school breakfast can help to counteract	<i>Difficult to Target Support</i> Upon second reading this quote does not fit in with the code description.	<i>Breakfast Meal Provided.</i>
"I think it's just nice that everybody's doing the same thing"	<i>Not Coded</i>	<i>Social Opportunities</i> In context the quote indicates that the staff member perceives the BC provides an environment where children and staff can be together, and therefore opportunities to socialise.	<i>Breakfast Meal Provided</i>
"I suppose a child who's coming in hungry every day..."	<i>Breakfast Meal Provided</i> Suggests there are children who do not get breakfast at home thus school breakfast is necessary	<i>Difficult to Target Support</i> Upon second reading this quote does not fit in with the code description.	<i>Breakfast Meal Provided</i>

## Appendix J (continued): Coding discrepancies and resolutions for Study 1b

### Quotes from School Staff (continued)

Quote	Principle Investigator Interpretation	Second Coder Interpretation	Resolution
"They've all had something healthy"	<i>Breakfast Meal Provided</i> School breakfast ensures that all children have access to a healthy breakfast meal	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>
"There is variety in what they have"	<i>Breakfast Meal Provided</i> Suggests that children have access to a variety of foods through school breakfast	<i>Not Coded</i>	<i>Breakfast Meal Provided</i>

### Appendix K: Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Social Opportunities	Children have opportunities to spend time and develop relationships with peers and staff before the start of the school day. Children are able to socialise with peers of different ages/classes/schools and breakfast clubs can help to break down barriers to social interaction that some children encounter.	No quotes coded under this theme.	While participants in Study 1b talked about breakfast clubs offering children the opportunity to socialise with peers, the 'Social Opportunities' theme in its entirety could not be applied to quotes in Study 1b in the same way as it was applied in Study 1a. This is because the social opportunities mentioned in Study 1b were not as diverse as those discussed in Study 1a.
Time for Informal Interaction	This appeared as a subtheme accompanied by other relevant subthemes under the main theme of 'Social Opportunities' in Study 1a as discussions on social interaction highlighted a multitude of social opportunities that went beyond 'time for informal interaction' e.g. socialising across age groups.	Breakfast clubs offered children the opportunity to spend time interacting informally with peers at the start of the school day.	The social opportunities afforded to children in Study 1b were limited in comparison to the social opportunities available to children in Study 1a. However, it is important to note that the overarching aim of the breakfast clubs in Study 1b was principally to provide children with a breakfast meal. Through discussions with participants in Study 1b it appeared that bringing children together to consume breakfast was enough to encourage valuable social interaction without any necessity for additional activities.

### Appendix K (continued): Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Positive Start to the School Day	Breakfast clubs provide an enjoyable and calm start to the school day, which begins at home where family routines are made easier on breakfast club days. Children are more likely to attend school on time and are more attentive in class following breakfast club.	Breakfast clubs provide an enjoyable and calm start to the school day, which begins at home where family routines are made easier on breakfast club days. Children are more likely to attend school on time and are more attentive, happy and energetic in class following breakfast club.	Breakfast clubs described in Study 1a and Study 1b seemed to have an equally positive impact on children and families at the start of the school day. References were made across both studies to improvements in family routines, punctuality and children's attentiveness. In Study 1b, improvements in children's moods were also mentioned.
Breakfast Meal Provided	Children enjoy having breakfast at breakfast club and in some cases are more willing or able to have breakfast at school than they are at home. A variety of healthy breakfast options are available at breakfast clubs and for some children these are more favourable than breakfast provided at home. Children can also try items at breakfast clubs that they don't get at home.		School breakfast provision was thought to be mostly enjoyable and advantageous to children's dietary habits across both studies
Integral Part of School	Breakfast clubs are recognised as an important element of school, which contribute positively to the external image of the school.	No quotes coded under this theme	Breakfast clubs in Study 1a were viewed by some as an important aspect of the school's overall image. This is not something that was highlighted in Study 1b.

**Appendix K (continued): Summary of themes from Study 1a and Study 1b**

<b>Theme</b>	<b>Theme Definition for Study 1a</b>	<b>Theme Definition for Study 1b</b>	<b>Similarities and Differences Across Study 1a and Study 1b</b>
Means of Support	Breakfast clubs offer reliable, flexible and affordable childcare, which is particularly beneficial to working parents. Parents are offered peace of mind knowing their children are safe and school staff can be assured that all children who attend breakfast club have had breakfast. Breakfast clubs also offer a supportive environment where parents and children can approach breakfast club staff and be assured that important information will be passed onto relevant school staff.	No quotes coded under this theme.	Breakfast clubs discussed in Study 1a were used by many parents as a form of childcare and were thought to offer a safe and supportive environment for families. The same advantages were not highlighted in relation to breakfast clubs in Study 1b.
Variety of Activities	Children are offered a variety of enjoyable activities to do at breakfast club.	No quotes coded under this theme	There were suggestions in Study 1a that breakfast clubs offered children a number of activities to participate in. Unsurprisingly, activities were not discussed in Study 1b because activities were not a feature of these breakfast clubs.

### Appendix K (continued): Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Exceeding Expectations	No quotes coded under this theme	Before breakfast club was in place, some thought it would be difficult (e.g. cause mess in class; time consuming) but it was not as problematic as expected	As the breakfast clubs in Study 1b were newly established it is likely that the initial expectations of participants were salient to them thus allowing them to compare their expectations to the reality of the situation. Initial expectations in relation to the more established clubs in Study 1a were not discussed.
Food Issues	Some of the items served at breakfast clubs could be considered unhealthy and did not always adhere to current food based standards. However, some staff and children thought it was fine to have unhealthy options available. Sometimes breakfast clubs lacked variety in the foods and drinks made available.	There were concerns that some of the foods and drinks served at school breakfast were of poor nutritional value (i.e. too much fat and sugar) and some foods and drinks were disliked or considered inadequate for breakfast. There were also concerns that children were able to consume a large amount of food during the school morning (e.g. could have breakfast at home and at school).	It was evident across both studies that the nutritional quality of some of the foods served in breakfast clubs was a concern. Additionally, the amount of food available to children in breakfast clubs in Study 1b caused apprehension amongst some participants.

**Appendix K (continued): Summary of themes from Study 1a and Study 1b**

<b>Theme</b>	<b>Theme Definition for Study 1a</b>	<b>Theme Definition for Study 1b</b>	<b>Similarities and Differences Across Study 1a and Study 1b</b>
Excluding Children	Cost was a barrier believed to prevent some children from attending breakfast clubs. It was evident that some children who could benefit from attending breakfast club were missing out because some school staff were providing breakfast to children in class on an ad hoc basis.	No quotes coded under this theme	There were suggestions made in Study 1a that breakfast clubs were not accessible to some children who would benefit most from attendance. One possible barrier to attendance at these clubs was the cost associated with participation. The issue of children being excluded from breakfast club was not raised in Study 1b where breakfast was provided to all children free of charge.
Long Day	There were concerns that breakfast club attendance resulted in children spending an extended amount of time in school. There were also suggestions that some children felt tired before arriving at breakfast club.	No quotes coded under this theme	Concerns regarding the extended school day were raised in Study 1a where breakfast club attendance involved children arriving at school up to an hour and a half before the start of the formal school day. Such concerns were not evident in Study 1b where breakfast was mainly served in the classroom at the start of the formal school day with only one school serving breakfast in the hall for 20 minutes before the start of school.



### Appendix K (continued): Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Practical Concerns	There were suggestions that breakfast club could benefit from the inclusion of more staff and pupils and improved facilities in some cases. It was also evident that there was tension between staff responsibilities in breakfast club and additional duties in school. Some staff were arriving at school earlier to get things done while others had passed jobs onto others to complete on their behalf.	No quotes coded under this theme. However, the subtheme of 'Facilities Need Improving', which appeared under 'Practical Concerns' in Study 1a was relevant to some quotes in Study 1b (See below).	More practical concerns were evident in Study 1a than Study 1b. While concerns raised in Study 1b were associated with the practicalities of where breakfast should be served, practical concerns in Study 1a surrounded facilities as well as issues with staffing.
Facilities Need Improving	This appeared as a subtheme accompanied by additional relevant subthemes under the main theme of 'Practical Concerns' in Study 1a	There were suggestions by some that breakfast should be served elsewhere in school because difficulties were occurring when it was served in the classroom	
Temporary Scheme	No quotes coded under this theme	There was uncertainty about whether the scheme would continue longer term and how this could have an impact on families who were reliant on the scheme	Breakfast clubs in Study 1b were in the pilot phase at the time data were collected so there were concerns that the scheme could end, which would have a particular impact on families already reliant on it. Such concerns were not evident in Study 1a where breakfast clubs were more established.

### Appendix K (continued): Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Lack of Parental Input	No quotes coded under this theme	Parents had little knowledge about how the scheme runs in school and the breakfast being served. Parents also had no control over whether their child consumed breakfast at school or not.	Parental input was not an issue that was raised in Study 1a but the breakfast clubs in this study started earlier than the normal school day so parents would have to consent to their child attending. Conversely, all children were automatically opted into most of the breakfast clubs in Study 1b as they took place in class so the decision of whether to have breakfast at school remained with the child.
Costly Scheme	No quotes coded under this theme	There were concerns about the large amount of money being spent on the scheme that could be better spent elsewhere.	The breakfast clubs in Study 1a were subsidised by payments made by parents of children who attended or through charitable support whereas breakfast clubs in Study 1b were funded by the Local Authority. Interestingly concerns about cost were only raised in Study 1b, where the cost of school breakfast had potentially wider reaching impacts beyond the breakfast scheme e.g. cuts to local services.

# Appendix K (continued): Summary of themes from Study 1a and Study 1b

Theme	Theme Definition for Study 1a	Theme Definition for Study 1b	Similarities and Differences Across Study 1a and Study 1b
Difficult to Target Support	No quotes coded under this theme	Suggestions were made that targeted breakfast provision might be better (i.e. offered free to families based on certain criteria). There was some stigma directed towards those who were reliant on school breakfast to feed their children, which would make efforts to target support difficult.	In Study 1b there were suggestions that school breakfast provision was only necessary for some children i.e. based on family need. However, there was some stigma associated with a reliance on school breakfast provision. While breakfast clubs in Study 1a were viewed as a useful means of providing breakfast to those who might otherwise skip it, there were no suggestions made that breakfast club should only be made available to children under certain circumstances and there was no stigma associated with attendance.

### Appendix Li: Friendship Qualities Scale

	Not True				Really True
My friend and I spend a lot of our free time together	1	2	3	4	5
My friend and I do things together	1	2	3	4	5
If other kids were bothering me, my friend would help me	1	2	3	4	5
My friend helps me when I'm having trouble with something	1	2	3	4	5
If my friend had to move away I would miss him/her	1	2	3	4	5
When I do a good job at something my friend is happy for me	1	2	3	4	5
Sometimes my friend does things for me or makes me feel special	1	2	3	4	5
I can get into fights with my friend	1	2	3	4	5
My friend would stick up for me if another kid was causing me trouble	1	2	3	4	5
If I have a problem at home or school I can talk to my friend about it	1	2	3	4	5
My friend can bug me or annoy me even though I ask him/her not to	1	2	3	4	5
If my friend had something that I needed to borrow he/she would loan it to me	1	2	3	4	5
If I said I was sorry after I had a fight with my friend he/she would still stay mad at me	1	2	3	4	5
My friend and I go to each other's houses after school and on weekends	1	2	3	4	5
Sometimes my friend and I just sit around and talk about things like school, sports and other things we like	1	2	3	4	5

### Appendix Li (continued): Friendship Qualities Scale

	Not True				Really True
My friend would help me if I needed it	1	2	3	4	5
If there is something bothering me I can tell my friend about it even if it is something I cannot tell to other people	1	2	3	4	5
If my friend or I do something that bothers the other one of us we can make up easily	1	2	3	4	5
My friend and I can argue a lot	1	2	3	4	5
My friend and I disagree about many things	1	2	3	4	5
If my friend and I have a fight or argument we can say "I'm sorry" and everything will be alright	1	2	3	4	5
I feel happy when I am with my friend	1	2	3	4	5
I think about my friend even when my friend is not around	1	2	3	4	5

## Appendix Lii: Quality of Relationship with Class Teacher

	Not True				Really True
My teacher and I spend time together at break time and lunch time	1	2	3	4	5
My teacher and I do things together	1	2	3	4	5
If other kids were bothering me, my teacher would help me	1	2	3	4	5
My teacher helps me when I am having trouble with something	1	2	3	4	5
If my teacher had to move away I would miss him/her	1	2	3	4	5
When I do a good job at something my teacher is happy for me	1	2	3	4	5
Sometimes my teacher does things for me or makes me feel special	1	2	3	4	5
When my teacher and I have an argument he/she can hurt my feelings	1	2	3	4	5
My teacher would stick up for me if another kid was causing me trouble	1	2	3	4	5
If I have a problem at school or at home I can talk to my teacher about it	1	2	3	4	5
My teacher can bug me or annoy me even though I ask him/her not to	1	2	3	4	5
If my teacher had something that I needed to borrow he/she would loan it to me	1	2	3	4	5
If I said I was sorry after I had an argument with my teacher he/she would still stay mad at me	1	2	3	4	5
My teacher and I spend time together after school	1	2	3	4	5
Sometimes my teacher and I just sit around and talk about things like school, sports and other things we like	1	2	3	4	5

**Appendix Lii (continued): Quality of Relationship with Class Teacher**

	Not True				Really True
My teacher would help me if I needed it	1	2	3	4	5
If there is something bothering me I can tell my teacher about it even if it is something I can not tell to other people	1	2	3	4	5
If my teacher or I do something that bothers the other one of us we can make up easily	1	2	3	4	5
My teacher and I can argue a lot	1	2	3	4	5
My teacher and I disagree about many things	1	2	3	4	5
If my teacher and I have an argument we can say "I'm sorry" and everything will be alright	1	2	3	4	5
I feel happy when I am with my teacher	1	2	3	4	5
I think about my teacher even when my teacher is not around	1	2	3	4	5

### Appendix Liii: Multidimensional Peer Victimisation Scale

During the last couple of weeks another pupil has...	Not at all	Once	More than once
Taken something of mine without asking			
Tried to get me into trouble with my friends			
Called me hurtful names			
Tried to break something of mine			
Swore at me			
Damaged something of mine on purpose			
Made fun of me because of the way I look			
Refused to talk to me			
Stole something from me			
Made other pupils not talk to me			
Beat me up			
Kicked me			
Made fun of me for some reason			
Pushed me over to try and hurt me			
Punched me			
Tried to stop my friends from liking me			



### Appendix Liv: Negative Treatment of Others

During the last couple of weeks I have...	Not at all	Once	More than once
Tried to break something that belonged to another pupil			
Pushed another pupil over to try and hurt them			
Damaged something on purpose that belonged to another pupil			
Called another pupil hurtful names			
Taken something from another pupil without asking			
Kicked another pupil			
Tried to stop another pupil's friends from liking them			
Made fun of another pupil because of the way they look			
Made other people not talk to another pupil			
Swore at another pupil			
Made fun of another pupil for some reason			
Tried to get another pupil into trouble with their friends			
Beat another pupil up			
Refused to talk to another pupil			
Punched another pupil			
Stole something from another pupil			

### Appendix M: Cronbach's Alpha of Study 2 scales

Scale	Subscales	Cronbach's $\alpha$
Friendship Qualities Scale	Companionship	.526
	Help	.810
	Security	.688
	Closeness	.666
	Conflict	.742
Quality of Relationship with Class Teacher	Companionship	.717
	Help	<sup>a</sup>
	Security	.696
	Closeness	.767
	Conflict	.545
Multidimensional Peer Victimisation Scale	Physical	.794
	Social	.647
	Verbal	.762
	Property	.617
Negative Treatment of Others	Physical	.825
	Social	.540
	Verbal	.773
	Property	.764

<sup>a</sup>Reliability could not be calculated for the Help subscale of the Quality of Relationship with Class Teacher scale as scores for the majority of questions were at ceiling.

**Appendix N: Results of Shapiro-Wilk analyses conducted on  
Study 2 data**

Friendship Quality Dimension	Group	Result Time 1	Result Time 2
Companionship	Breakfast Club	$W = .849; p = .017^*$	$W = .919; p = .189$
	After School Club	$W = .882; p = .013^*$	$W = .856; p = .004^{**}$
	Both	$W = .891; p = .142$	$W = .852; p = .045^*$
	None	$W = .924; p = .011^*$	$W = .953; p = .097$
Help	Breakfast Club	$W = .901; p = .098$	$W = .746; p = .001^{**}$
	After School Club	$W = .627; p = .000^{**}$	$W = .760; p = .000^{**}$
	Both	$W = .845; p = .036^*$	$W = .720; p = .001^{**}$
	None	$W = .866; p = .000^{**}$	$W = .890; p = .001^{**}$
Security	Breakfast Club	$W = .860; p = .024^*$	$W = .893; p = .075$
	After School Club	$W = .840; p = .002^{**}$	$W = .672; p = .000^{**}$
	Both	$W = .854; p = .048^*$	$W = .784; p = .006^{**}$
	None	$W = .884; p = .001^{**}$	$W = .894; p = .001^{**}$
Closeness	Breakfast Club	$W = .837; p = .012^*$	$W = .853; p = .019^*$
	After School Club	$W = .835; p = .002^{**}$	$W = .856; p = .004^{**}$
	Both	$W = .774; p = .004^{**}$	$W = .648; p = .000^{**}$
	None	$W = .740; p = .000^{**}$	$W = .865; p = .000^{**}$
Conflict	Breakfast Club	$W = .863; p = .026^*$	$W = .940; p = .377$
	After School Club	$W = .951; p = .328$	$W = .897; p = .025^*$
	Both	$W = .849; p = .041^*$	$W = .907; p = .227$
	None	$W = .940; p = .036^*$	$W = .882; p = .001^{**}$
Emotional Quality	Breakfast Club	$W = .933; p = .306$	$W = .893; p = .074$
	After School Club	$W = .795; p = .000^{**}$	$W = .941; p = .209$
	Both	$W = .857; p = .052$	$W = .741; p = .002^{**}$
	None	$W = .921; p = .008^{**}$	$W = .937; p = .027^*$
Number of Friends	Breakfast Club	$W = .844; p = .014^*$	$W = .723; p = .000^{**}$
	After School Club	$W = .900; p = .030^*$	$W = .850; p = .003^{**}$
	Both	$W = .795; p = .008^{**}$	$W = .662; p = .000^{**}$
	None	$W = .926; p = .012^*$	$W = .900; p = .002^{**}$

\* $p < .05$

\*\* $p < .01$

**Appendix N (continued): Results of Shapiro-Wilk analyses  
conducted on Study 2 data**

Quality of Relationship with Class Teacher Dimension	Group	Result Time 1	Result Time 2
Companionship	Breakfast Club	$W = .951; p = .547$	$W = .961; p = .717$
	After School Club	$W = .819; p = .001^{**}$	$W = .855; p = .004^{**}$
	Both	$W = .892; p = .148$	$W = .829; p = .023^*$
	None	$W = .810; p = .000^{**}$	$W = .799; p = .000^{**}$
Help	Breakfast Club	$W = .922; p = .206$	$W = .879; p = .046^*$
	After School Club	$W = .852; p = .004^{**}$	$W = .915; p = .060^*$
	Both	$W = .876; p = .093$	$W = .833; p = .026^*$
	None	$W = .880; p = .001^{**}$	$W = .901; p = .003^{**}$
Security	Breakfast Club	$W = .923; p = .212$	$W = .828; p = .009^{**}$
	After School Club	$W = .872; p = .008^{**}$	$W = .913; p = .055$
	Both	$W = .783; p = .006^{**}$	$W = .778; p = .005^{**}$
	None	$W = .939; p = .038^*$	$W = .944; p = .058$
Closeness	Breakfast Club	$W = .818; p = .006^{**}$	$W = .903; p = .104$
	After School Club	$W = .904; p = .036^*$	$W = .929; p = .115$
	Both	$W = .792; p = .007^{**}$	$W = .824; p = .020^*$
	None	$W = .923; p = .012^*$	$W = .933; p = .025^*$
Conflict	Breakfast Club	$W = .813; p = .005^{**}$	$W = .834; p = .010^*$
	After School Club	$W = .918; p = .071$	$W = .926; p = .099$
	Both	$W = .762; p = .003^{**}$	$W = .909; p = .237$
	None	$W = .874; p = .001^{**}$	$W = .817; p = .000^{**}$
Emotional Quality	Breakfast Club	$W = .890; p = .067$	$W = .891; p = .069$
	After School Club	$W = .900; p = .030^*$	$W = .957; p = .436$
	Both	$W = .762; p = .003^{**}$	$W = .846; p = .038^*$
	None	$W = .874; p = .001^{**}$	$W = .966; p = .289$

\* $p < .05$

\*\* $p < .01$

**Appendix N (continued): Results of Shapiro-Wilk analyses  
conducted on Study 2 data**

Peer Victimisation Dimensions	Group	Result Time 1	Result Time 2
Physical	Breakfast Club	$W = .829; p = .009^{**}$	$W = .700; p = .000^{**}$
	After School Club	$W = .571; p = .000^{**}$	$W = .639; p = .000^{**}$
	Both	$W = .854; p = .048^{*}$	$W = .804; p = .011^{*}$
	None	$W = .738; p = .000^{**}$	$W = .638; p = .000^{**}$
Social	Breakfast Club	$W = .870; p = .033^{*}$	$W = .835; p = .011^{*}$
	After School Club	$W = .821; p = .001^{**}$	$W = .728; p = .000^{**}$
	Both	$W = .816; p = .015^{*}$	$W = .781; p = .005^{**}$
	None	$W = .858; p = .000^{**}$	$W = .759; p = .000^{**}$
Verbal	Breakfast Club	$W = .904; p = .109$	$W = .828; p = .008^{**}$
	After School Club	$W = .785; p = .000^{**}$	$W = .716; p = .000^{**}$
	Both	$W = .762; p = .003^{**}$	$W = .781; p = .005^{**}$
	None	$W = .800; p = .000^{**}$	$W = .759; p = .000^{**}$
Property	Breakfast Club	$W = .844; p = .014^{*}$	$W = .746; p = .001^{**}$
	After School Club	$W = .764; p = .000^{**}$	$W = .571; p = .000^{**}$
	Both	$W = .784; p = .006^{**}$	$W = .745; p = .002^{**}$
	None	$W = .609; p = .000^{**}$	$W = .548; p = .000^{**}$
Overall	Breakfast Club	$W = .919; p = .189$	$W = .836; p = .011^{*}$
	After School Club	$W = .850; p = .003^{**}$	$W = .722; p = .000^{**}$
	Both	$W = .898; p = .175$	$W = .876; p = .093$
	None	$W = .836; p = .000^{**}$	$W = .773; p = .000^{**}$

\* $p < .05$

\*\* $p < .01$

**Appendix N (continued): Results of Shapiro-Wilk analyses  
conducted on Study 2 data**

Treatment of Others Dimensions	Group	Result Time 1	Result Time 2
Physical	Breakfast Club	$W = .480; p = .000^{**}$	$W = .552; p = .000^{**}$
	After School Club	$W = .381; p = .000^{**}$	$W = .410; p = .000^{**}$
	Both	$W = .504; p = .000^{**}$	$W = .409; p = .000^{**}$
	None	$W = .515; p = .000^{**}$	$W = .276; p = .000^{**}$
Social	Breakfast Club	$W = .789; p = .003^{**}$	$W = .709; p = .000^{**}$
	After School Club	$W = .612; p = .000^{**}$	$W = .704; p = .000^{**}$
	Both	$W = .804; p = .011^{*}$	$W = .622; p = .000^{**}$
	None	$W = .673; p = .000^{**}$	$W = .695; p = .000^{**}$
Verbal	Breakfast Club	$W = .727; p = .000^{**}$	$W = .639; p = .000^{**}$
	After School Club	$W = .517; p = .000^{**}$	$W = .440; p = .000^{**}$
	Both	$W = .572; p = .000^{**}$	$W = .474; p = .000^{**}$
	None	$W = .572; p = .000^{**}$	$W = .572; p = .000^{**}$
Property	Breakfast Club	$W = .596; p = .000^{**}$	$W = .284; p = .000^{**}$
	After School Club	$W = .333; p = .000^{**}$	$W = .333; p = .000^{**}$
	Both	$W = .504; p = .000^{**}$	$W = .504; p = .000^{**}$
	None	$W = .361; p = .000^{**}$	$W = .361; p = .000^{**}$
Overall	Breakfast Club	$W = .740; p = .001^{**}$	$W = .725; p = .000^{**}$
	After School Club	$W = .523; p = .000^{**}$	$W = .555; p = .000^{**}$
	Both	$W = .661; p = .000^{**}$	$W = .577; p = .000^{**}$
	None	$W = .656; p = .000^{**}$	$W = .588; p = .000^{**}$

\* $p < .05$

\*\* $p < .01$

## Appendix O: Median and range of scores from Study 2

**Table O1:** Median and range of scores for Number of Friends.

		Breakfast Clubs	After School Clubs	Both	None
Number of Friends Time 1	Median	9.00	7.00	13.00	8.00
	Range	16.00	14.00	37.00	20.00
	(Min-Max)	(6.00-22.00)	(3.00-17.00)	(3.00-40.00)	(2.00-22.00)
Number of Friends Time 2	Median	9.00	7.00	10.00	8.00
	Range	25.00	20.00	48.00	24.00
	(Min-Max)	(6.00-31.00)	(3.00-23.00)	(4.00-52.00)	(1.00-25.00)

**Table O2:** Median and range of scores for Time Spent with Best Friend.

		Breakfast Clubs	After School Clubs	Both	None
Time with Best Friend Time 1	Median	3.00	3.00	3.00	3.00
	Range	1.00	1.00	1.00	2.00
	(Min-Max)	(2.00-3.00)	(2.00-3.00)	(2.00-3.00)	(1.00-3.00)
Time with Best Friend Time 2	Median	3.00	3.00	3.00	3.00
	Range	1.00	1.00	2.00	2.00
	(Min-Max)	(2.00-3.00)	(2.00-3.00)	(1.00-3.00)	(1.00-3.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O3:** Median and range of scores for Companionship.

Friendship Quality		Breakfast	After	Both	None
Dimension		Clubs	School		
			Clubs		
Companionship	Median	17.00	17.00	18.00	16.00
Time 1	Range	13.00	13.00	7.00	12.00
	(Min-Max)	(7.00-20.00)	(7.00-20.00)	(13.00-20.00)	(8.00-20.00)
Companionship	Median	16.00	18.00	17.00	16.00
Time 2	Range	11.00	11.00	8.00	12.00
	(Min-Max)	(9.00-20.00)	(9.00-20.00)	(12.00-20.00)	(8.00-20.00)



**Appendix O (continued): Median and range of scores from Study 2**

**Table O4:** Median and range of scores for Help.

Friendship Quality		Breakfast	After	Both	None
Dimension		Clubs	School Clubs		
Help	Median	22.00	24.00	24.00	22.00
Time 1	Range	11.00	17.00	9.00	16.00
	(Min-Max)	(14.00-25.00)	(8.00-25.00)	(16.00-20.00)	(9.00-25.00)
Help	Median	23.00	24.00	24.00	21.50
Time 2	Range	20.00	14.00	12.00	13.00
	(Min-Max)	(5.00-25.00)	(11.00-25.00)	(13.00-25.00)	(12.00-25.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O5:** Median and range of scores for Security.

Friendship Quality		Breakfast	After School	Both	None
Dimension		Clubs	Clubs		
Security	Median	22.00	23.50	23.00	22.00
Time 1	Range	10.00	8.00	11.00	11.00
	(Min-Max)	(15.00- 25.00)	(17.00- 25.00)	(14.00- 25.00)	(14.00- 25.00)
Security	Median	21.00	24.00	22.00	21.00
Time 2	Range	14.00	20.00	13.00	14.00
	(Min-Max)	(11.00- 25.00)	(5.00- 25.00)	(12.00- 25.00)	(11.00- 25.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O6:** Median and range of scores for Closeness.

Friendship		Breakfast	After School	Both	None
Quality		Clubs	Clubs		
Dimension					
Closeness	Median	22.00	24.00 <sup>a</sup>	24.00	22.00
Time 1	Range	12.00	8.00	10.00	21.00
	(Min-Max)	(13.00- 25.00)	(17.00- 25.00)	(15.00- 25.00)	(4.00- 25.00)
Closeness	Median	21.00	16.00 <sup>a</sup>	24.00	21.00
Time 2	Range	15.00	21.00	15.00	21.00
	(Min-Max)	(10.00- 25.00)	(4.00- 25.00)	(10.00- 25.00)	(4.00- 25.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O7:** Median and range of scores for Conflict.

Friendship		Breakfast	After	Both	None
Quality		Clubs	School		
Dimension			Clubs		
Conflict	Median	8.00	8.50	6.00	8.00
Time 1	Range	16.00	17.00	17.00	17.00
	(Min-	(4.00-	(3.00-	(3.00-	(3.00-
	Max)	20.00)	20.00)	20.00)	20.00)
Conflict	Median	9.00	7.50	8.00	8.00
Time 2	Range	16.00	16.00	14.00	15.00
	(Min-	(4.00-	(4.00-	(4.00-	(4.00-
	Max)	20.00)	20.00)	18.00)	19.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O8:** Median and range of scores for Emotional Quality.

		Breakfast Clubs	After School Clubs	Both	None
Emotional Quality Time 1	Median	66.00	70.50 <sup>b</sup>	70.00	65.00
	Range	26.00	33.00	30.00	42.00
	(Min- Max)	(49.00- 75.00)	(42.00- 75.00)	(45.00- 75.00)	(33.00- 75.00)
Emotional Quality Time 2	Median	65.00	57.00 <sup>b</sup>	70.00	60.50
	Range	43.00	37.00	38.00	30.00
	(Min- Max)	(32.00- 75.00)	(38.00- 75.00)	(37.00- 75.00)	(45.00- 75.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O9:** Median and range of scores for Companionship with class teacher.

Quality of Relationship with Class Teacher Dimension		Breakfast Clubs	After School Clubs	Both	None
Companionship	Median	9.00	6.00 <sup>c</sup>	9.00 <sup>cd</sup>	7.00 <sup>d</sup>
Time 1	Range	12.00	11.00	14.00	16.00
	(Min- Max)	(4.00-16- 00)	(4.00- 15.00)	(6.00- 20.00)	(4.00- 20.00)
Companionship	Median	8.00	6.00	7.00	6.50
Time 2	Range	9.00	8.00	16.00	16.00
	(Min- Max)	(4.00- 13.00)	(4.00- 12.00)	(4.00- 20.00)	(4.00- 20.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O10:** Median and range of scores for Help from class teacher.

Quality of Relationship with Class Teacher		Breakfast	After	Both	None
Dimension		Clubs	School		
Help Time 1	Median	22.00	21.00	22.00	21.00
	Range	7.00	15.00	12.00	20.00
	(Min- Max)	(18.00- 25.00)	(10.00- 25.00)	(13.00- 25.00)	(5.00- 25.00)
Help Time 2	Median	22.00	19.00	22.00	20.00
	Range	11.00	18.00	13.00	16.00
	(Min- Max)	(14.00- 25.00)	(7.00- 25.00)	(12.00- 25.00)	(9.00- 25.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O11:** Median and range of scores for Security from class teacher.

Quality of Relationship with Class Teacher Dimension		Breakfast Clubs	After School Clubs	Both	None
Security Time 1	Median	21.00	22.00	24.00	19.00
	Range	8.00	20.00	12.00	16.00
	(Min- Max)	(17.00- 25.00)	(5.00- 25.00)	(13.00- 25.00)	(9.00- 25.00)
Security Time 2	Median	23.00	18.00	24.00	18.00
	Range	13.00	17.00	16.00	16.00
	(Min- Max)	(12.00- 25.00)	(8.00- 25.00)	(9.00- 26.00)	(9.00- 25.00)



**Appendix O (continued): Median and range of scores from Study 2**

**Table O12:** Median and range of scores for Closeness to class teacher.

Quality of Relationship with Class Teacher Dimension		Breakfast Clubs	After School Clubs	Both	None
Closeness Time 1	Median	23.00	21.00 <sup>e</sup>	23.00	19.50
	Range	17.00	12.00	14.00	16.00
	(Min- Max)	(8.00- 25.00)	(13.00- 25.00)	(11.00- 25.00)	(9.00- 25.00)
Closeness Time 2	Median	19.00	18.00 <sup>e</sup>	23.00	19.00
	Range	17.00	18.00	14.00	16.00
	(Min- Max)	(8.00- 25.00)	(7.00- 25.00)	(11.00- 25.00)	(9.00- 25.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O13:** Median and range of scores for Conflict with class teacher.

Quality of Relationship with Class Teacher Dimension		Breakfast Clubs	After School Clubs	Both	None
Conflict Time 1	Median	5.00	7.50	5.00	8.00
	Range	9.00	9.00	11.00	16.00
	(Min- Max)	(4.00- 13.00)	(4.00- 13.00)	(4.00- 15.00)	(4.00- 20.00)
Conflict Time 2	Median	7.00	6.50	8.00	6.00
	Range	13.00	9.00	8.00	12.00
	(Min- Max)	(4.00- 17.00)	(4.00- 13.00)	(4.00- 12.00)	(4.00- 16.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O14:** Median and range of scores for Emotional Quality.

Quality of Relationship with Class Teacher Dimension		Breakfast Clubs	After School Clubs	Both	None
Emotional Quality Time 1	Median	68.00	63.00	70.00	60.50
	Range	28.00	43.00	32.00	43.00
	(Min-Max)	(46.00- 74.00)	(32.00- 75.00)	(43.00- 75.00)	(32.00- 75.00)
Emotional Quality Time 2	Median	65.00	56.00	69.00	57.00
	Range	41.00	48.00	43.00	40.00
	(Min-Max)	(34.00- 75.00)	(27.00- 75.00)	(32.00- 75.00)	(35.00- 75.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O15:** Median and range of scores for Overall Peer

Victimisation.

Peer Victimisation		Breakfast	After	Both	None
Scale Dimension		Clubs	School		
			Clubs		
Overall	Median	8.00	3.00	11.00	4.00
Time 1	Range	24.00	18.00	21.00	28.00
	(Min-	(0.00-	(0.00-	(0.00-	(0.00-
	Max)	24.00)	18.00)	21.00)	28.00)
Overall	Median	5.00	1.50	4.00	2.00
Time 2	Range	25.00	20.00	21.00	26.00
	(Min-	(0.00-	(0.00-	(0.00-	(0.00-
	Max)	25.00)	20.00)	21.00)	26.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O16:** Median and range of scores for Physical Victimisation.

Peer Victimisation		Breakfast	After	Both	None
Scale Dimension		Clubs	School		
			Clubs		
Physical	Median	1.00	0.00	2.00	0.00
Time 1	Range	8.00	6.00	7.00	7.00
	(Min-	(0.00-8.00)	(0.00-	(0.00-	(0.00-
	Max)		6.00)	7.00)	7.00)
Physical	Median	0.00	0.00	1.00	0.00
Time 2	Range	8.00	4.00	4.00	9.00
	(Min-	(0.00-	(0.00-	(0.00-	(0.00-
	Max)	8.00)	4.00)	4.00)	9.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O17:** Median and range of scores for Social Victimisation.

Peer Victimisation		Breakfast	After	Both	None
Scale Dimension		Clubs	School		
			Clubs		
Social	Median	2.00	1.00	4.00	1.50
Time 1	Range	8.00	4.00	8.00	8.00
	(Min-	(0.00-8.00)	(0.00-	(0.00-	(0.00-
	Max)		4.00)	8.00)	8.00)
Social	Median	1.00	0.00	2.00	1.00
Time 2	Range	7.00	8.00	8.00	8.00
	(Min-	(0.00-7.00)	(0.00-	(0.00-	(0.00-
	Max)		8.00)	8.00)	8.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O18:** Median and range of scores for Verbal Victimisation.

Peer Victimisation		Breakfast	After	Both	None
Scale Dimension		Clubs	School		
			Clubs		
Verbal	Median	3.00	0.50	0.00	1.00
Time 1	Range	8.00	6.00	5.00	8.00
	(Min-	(0.00-8.00)	(0.00-	(0.00-	(0.00-
	Max)		6.00)	5.00)	8.00)
Verbal	Median	2.00	0.00	4.00	0.00
Time 2	Range	8.00	4.00	6.00	8.00
	(Min-	(0.00-8.00)	(0.00-	(0.00-	(0.00-
	Max)		4.00)	6.00)	8.00)

**Appendix O (continued): Median and range of scores from Study 2**

**Table O19:** Median and range of scores for Property Victimisation.

Peer Victimisation		Breakfast	After	Both	None
Scale Dimension		Clubs	School		
			Clubs		
Property	Median	1.00	0.00	0.00	0.00
Time 1	Range	4.00	3.00	7.00	6.00
	(Min-	(0.00-4.00)	(0.00-	(0.00-	(0.00-
	Max)		3.00)	7.00)	6.00)
Property	Median	0.00	0.00	0.00	0.00
Time 2	Range	5.00	4.00	6.00	7.00
	(Min-	(0.00-5.00)	(0.00-	(0.00-	(0.00-
	Max)		4.00)	6.00)	7.00)



**Appendix O (continued): Median and range of scores from Study 2**

**Table O20:** Median and range of scores for Overall Negative Treatment of Others.

Negative Treatment of Others Scale Dimension		Breakfast Clubs	After School Clubs	Both	None
Overall	Median	1.00	0.00	1.00	1.00
Time 1	Range	17.00	24.00	14.00	17.00
	(Min-	(0.00-	(0.00-	(0.00-	(0.00-
	Max)	17.00)	24.00)	14.00)	17.00)
Overall	Median	1.00	0.00	0.00	0.50
Time 2	Range	11.00	17.00	12.00	18.00
	(Min-	(0.00-	(0.00-	(0.00-	(0.00-
	Max)	11.00)	17.00)	12.00)	18.00)

**Appendix O (continued): Median and range of scores from  
Study 2**

**Table O21:** Median and range of scores for Physical Negative  
Treatment of Others.

Negative Treatment of Others Scale		Breakfast Clubs	After School Clubs	Both	None
Dimension					
Physical	Median	0.00	0.00	0.00	0.00
Time 1	Range	8.00	7.00	4.00	4.00
	(Min- Max)	(0.00-8.00)	(0.00- 7.00)	(0.00- 4.00)	(0.00- 4.00)
Physical		0.00	0.00	0.00	0.00
		5.00	6.00	7.00	8.00
Time 2		(0.00- 5.00)	(0.00- 6.00)	(0.00- 7.00)	(0.00- 8.00)

**Appendix O (continued): Median and range of scores from  
Study 2**

**Table O22:** Median and range of scores for Social Negative  
Treatment of Others.

Negative Treatment of Others Scale Dimension		Breakfast Clubs	After School Clubs	Both	None
Social Time 1	Median	1.00	0.00	1.00	1.00
	Range	3.00	6.00	4.00	7.00
	(Min- Max)	(0.00-3.00)	(0.00- 6.00)	(0.00- 4.00)	(0.00- 7.00)
Social Time 2	Median	0.00	0.00	0.00	0.00
	Range	3.00	4.00	4.00	4.00
	(Min- Max)	(0.00-3.00)	(0.00- 4.00)	(0.00- 4.00)	(0.00- 4.00)

**Appendix O (continued): Median and range of scores from  
Study 2**

**Table O23:** Median and range of scores for Verbal Negative  
Treatment of Others.

Negative Treatment of Others Scale Dimension		Breakfast Clubs	After School Clubs	Both	None
Verbal Time 1	Median	0.00	0.00	0.00	0.00
	Range	5.00	7.00	1.00	3.00
	(Min- Max)	(0.00-5.00)	(0.00- 7.00)	(0.00- 1.00)	(0.00- 3.00)
Verbal Time 2	Median	0.00	0.00	0.00	0.00
	Range	6.00	5.00	3.00	8.00
	(Min- Max)	(0.00-6.00)	(0.00- 5.00)	(0.00- 3.00)	(0.00- 8.00)

**Appendix O (continued): Median and range of scores from  
Study 2**

**Table O24:** Median and range of scores for Property Related  
Negative Treatment of Others.

Negative Treatment of Others Scale Dimension		Breakfast Clubs	After School Clubs	Both	None
Property	Median	0.00	0.00	0.00	0.00
Time 1	Range	3.00	5.00	6.00	0.00
	(Min-	(0.00-3.00)	(0.00-	(0.00-	(0.00-
	Max)		5.00)	6.00)	5.00)
Property	Median	0.00	0.00	0.00	0.00
Time 2	Range	2.00	5.00	2.00	3.00
	(Min-	(0.00-2.00)	(0.00-	(0.00-	(0.00-
	Max)		5.00)	2.00)	3.00)

Appendix P: Study 3 materials for children



Name:		
Age:		Girl / Boy
Class:		

Participant number:

Date of Birth:

School:

Research Project Contact:

Pamela Graham  
Cognition and Communication  
Research Centre  
Department of Psychology  
Northumbria University  
Newcastle upon Tyne



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## Appendix P (continued): Study 3 materials for children

In this booklet you will be asked to complete some questions about the help and support you think you get from people at your school. You will also be asked to answer some questions about how you feel about school and what you do at school.

Let's start with the questions about help and support.

On the next few pages you will see some sentences about the help and support you might get from people at your school.

Your job is to think carefully about each sentence then choose:

- One number to show how often you get the support described in the sentence

Then choose...

- One number to show how important it is to you to get the support described in the sentence

Like this...

	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>My class teacher...</b>										
Helps me to solve problems	1	2	3	4	5	6		1	2	3

The person that filled in the question above thinks that their teacher helps them to solve problems some of the time and thinks that it is important that their teacher helps them to solve problems.

Now you have a go...

## Appendix P (continued): Study 3 materials for children

	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>My class teacher...</b>										
Helps me to solve problems	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>		<b>1</b>	<b>2</b>	<b>3</b>

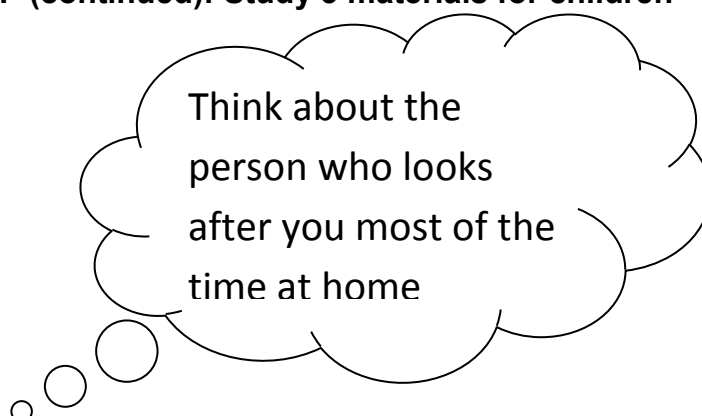
What numbers should you circle if you think that your teacher helps you to solve problems almost never and you think that it is very important that your teacher helps you to solve problems?

Ok. Now you've got the hang of what you're going to do you can move on to answer the questions. But remember...

- Read the sentences very carefully
- There are no right or wrong answers so just say what you think
- No one will know that these are your answers as your name is not on the sheet
- If you change your mind about wanting to answer the questions you can stop at any time
- Ask for help if you get stuck

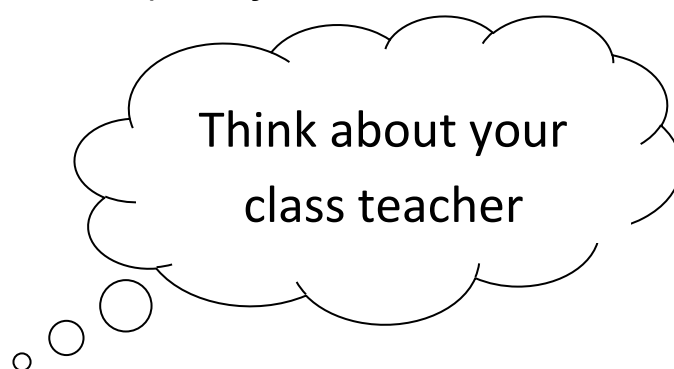


## Appendix P (continued): Study 3 materials for children



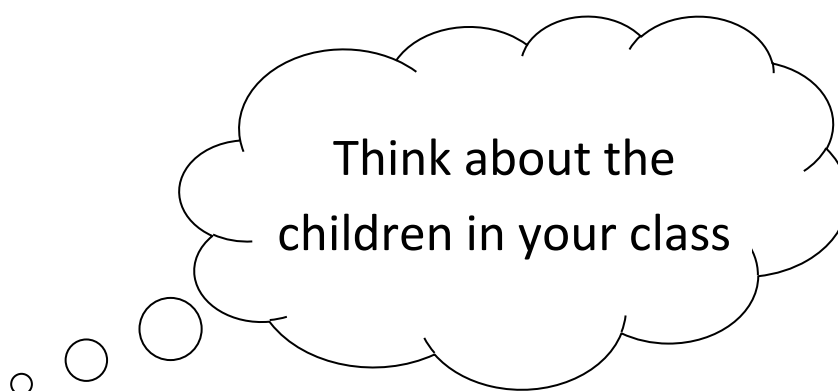
	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>The person who looks after me most of the time at home...</b>										
Shows they are proud of me	1	2	3	4	5	6		1	2	3
Understands me	1	2	3	4	5	6		1	2	3
Listens to me when I need to talk	1	2	3	4	5	6		1	2	3
Makes suggestions when I don't know what to do	1	2	3	4	5	6		1	2	3
Gives me good advice	1	2	3	4	5	6		1	2	3
Helps me solve problems by giving me information	1	2	3	4	5	6		1	2	3
Tells me I did a good job when I do something well	1	2	3	4	5	6		1	2	3
Nicely tells me when I make a mistake	1	2	3	4	5	6		1	2	3
Rewards me when I've done something well	1	2	3	4	5	6		1	2	3
Helps me practice my activities	1	2	3	4	5	6		1	2	3
Takes time to help me decide things	1	2	3	4	5	6		1	2	3
Gets me many of the things I need	1	2	3	4	5	6		1	2	3

## Appendix P (continued): Study 3 materials for children



	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>My class teacher...</b>										
Cares about me	1	2	3	4	5	6		1	2	3
Treats me fairly	1	2	3	4	5	6		1	2	3
Makes it ok to ask questions	1	2	3	4	5	6		1	2	3
Explains things that I don't understand	1	2	3	4	5	6		1	2	3
Shows me how to do things	1	2	3	4	5	6		1	2	3
Helps me solve problems by giving me information	1	2	3	4	5	6		1	2	3
Tells me I did a good job when I've done something well	1	2	3	4	5	6		1	2	3
Nicely tells me when I make mistakes	1	2	3	4	5	6		1	2	3
Tells me how well I do on tasks	1	2	3	4	5	6		1	2	3
Makes sure I have what I need for school	1	2	3	4	5	6		1	2	3
Takes time to help me learn to do something well	1	2	3	4	5	6		1	2	3
Spends time with me when I need help	1	2	3	4	5	6		1	2	3

## Appendix P (continued): Study 3 materials for children



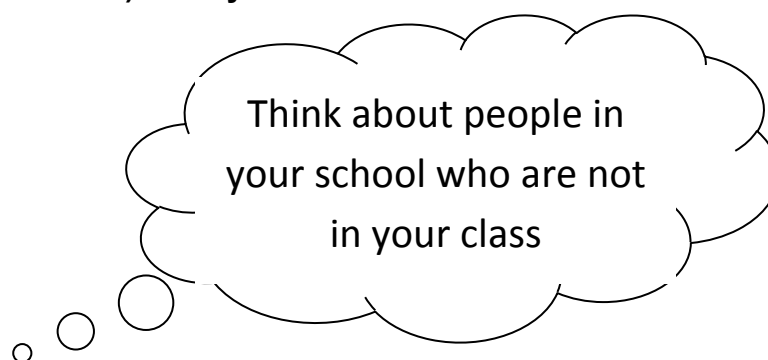
	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>Children in my class...</b>										
Treat me nicely	1	2	3	4	5	6		1	2	3
Like most of my ideas and opinions	1	2	3	4	5	6		1	2	3
Pay attention to me	1	2	3	4	5	6		1	2	3
Give me ideas when I don't know what to do	1	2	3	4	5	6		1	2	3
Give me information so I can learn new things	1	2	3	4	5	6		1	2	3
Give me good advice	1	2	3	4	5	6		1	2	3
Tell me I did a good job when I've done something well	1	2	3	4	5	6		1	2	3
Nicely tell me when I make mistakes	1	2	3	4	5	6		1	2	3
Notice when I have worked hard	1	2	3	4	5	6		1	2	3
Ask me to join activities	1	2	3	4	5	6		1	2	3
Spend time doing things with me	1	2	3	4	5	6		1	2	3
Help me with projects in class	1	2	3	4	5	6		1	2	3

## Appendix P (continued): Study 3 materials for children



	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
<b>My best friend...</b>										
Understands my feelings	1	2	3	4	5	6		1	2	3
Sticks up for me if others are teasing me badly	1	2	3	4	5	6		1	2	3
Helps me when I'm lonely	1	2	3	4	5	6		1	2	3
Gives me ideas when I don't know what to do	1	2	3	4	5	6		1	2	3
Gives me good advice	1	2	3	4	5	6		1	2	3
Explains things that I don't understand	1	2	3	4	5	6		1	2	3
Tells me he or she likes what I do	1	2	3	4	5	6		1	2	3
Nicely tells me when I make mistakes	1	2	3	4	5	6		1	2	3
Nicely tells me the truth about how I do on things	1	2	3	4	5	6		1	2	3
Helps me when I need it	1	2	3	4	5	6		1	2	3
Shares his or her things with me	1	2	3	4	5	6		1	2	3
Takes time to help me solve problems	1	2	3	4	5	6		1	2	3

## Appendix P (continued): Study 3 materials for children



	How often?							How important?		
	Never	Almost Never	Some of the time	Most of the Time	Almost Always	Always		Not important	Important	Very important
People in my school...										
Care about me	1	2	3	4	5	6		1	2	3
Understand me	1	2	3	4	5	6		1	2	3
Listen to me when I need to talk	1	2	3	4	5	6		1	2	3
Give me good advice	1	2	3	4	5	6		1	2	3
Help me solve problems by giving me information	1	2	3	4	5	6		1	2	3
Explain things that I don't understand	1	2	3	4	5	6		1	2	3
Tell me how well I do on tasks	1	2	3	4	5	6		1	2	3
Tell me I did a good job when I've done something well	1	2	3	4	5	6		1	2	3
Nicely tell me when I make mistakes	1	2	3	4	5	6		1	2	3
Take time to help me decide things	1	2	3	4	5	6		1	2	3
Spend time with me when I need help	1	2	3	4	5	6		1	2	3
Make sure I have the things I need for school	1	2	3	4	5	6		1	2	3

## Appendix P (continued): Study 3 materials for children

### ***You're doing a fantastic job!***

Now we're going to look at how you feel about school and what you do at school.

On the next page there are some sentences about how some people feel about school and what they do at school. Your job is to think very carefully about each sentence then choose a number to show how often each sentence is true for you.

Like this...

	Never		Sometimes		All of the time
I like mushroom on my pizza	1	2	3	4	5

The person who answered the question above does not like mushroom on their pizza.

Now you have a go. What number would you circle if you liked mushroom on your pizza all of the time?

	Never		Sometimes		All of the time
I like mushroom on my pizza	1	2	3	4	5

Ok. Now you've got the hang of what you're going to do you can move on to answer the questions. But remember...

- Read the sentences very carefully
- There are no right or wrong answers so just say what you think
- No one will know that these are your answers as your name is not on the sheet
-

### Appendix P (continued): Study 3 materials for children

- If you change your mind about wanting to answer the questions you can stop at any time
- Ask for help if you get stuck

	Never		Sometimes		All of the time
I feel happy in school	1	2	3	4	5
I follow the rules at school	1	2	3	4	5
I am interested in the work at school	1	2	3	4	5
I read extra books to learn more about things we do in school	1	2	3	4	5
When I read a book, I ask myself questions to make sure I understand what it is about	1	2	3	4	5
I try to watch TV shows about things we do in school	1	2	3	4	5
My classroom is a fun place to be	1	2	3	4	5
I feel excited by my work at school	1	2	3	4	5
I pay attention in class	1	2	3	4	5
If I don't understand what I read, I go back and read over it again	1	2	3	4	5
If I don't know what a word means when I am reading, I do something to figure it out	1	2	3	4	5
I check my school work for mistakes	1	2	3	4	5
I feel bored in school	1	2	3	4	5
I get in trouble at school	1	2	3	4	5
I like being at school	1	2	3	4	5

- **Appendix P (continued): Study 3 materials for children**

When I am in class I just act as if I am working	1	2	3	4	5
I study at home even when I don't have a test	1	2	3	4	5
I complete my work on time	1	2	3	4	5
I talk with people outside of school about what I am learning in class	1	2	3	4	5



- **Appendix P (continued): Study 3 materials for children**

**Nearly finished...last page!**

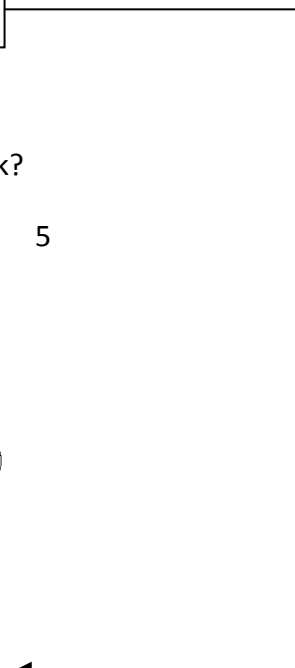
Just a few questions to answer about whether you go to breakfast club or any after school clubs.

Do you go to your school breakfast club?

Yes

☐


No

☐


How many days do you go to breakfast club each week?

1

2

3

4

5

How do you feel about going to breakfast club?



Do you go to any after school clubs?

Yes

☐


No

☐

Turn the page



Please make a list of the after school clubs that you go to	How many days do you go to this club each week					How do you feel about going to this club				
	1	2	3	4	5					
	1	2	3	4	5					
	1	2	3	4	5					
	1	2	3	4	5					

**Appendix Q: Results of Shapiro-Wilk analyses conducted on Study 3 data**

Parent Support Dimensions	Group	Frequency of Support Results	Importance of Support Results
Emotional	Breakfast Club	$W = .800; p = .000^{**}$	$W = .740; p = .000^{**}$
	After School Club	$W = .925; p = .020^*$	$W = .872; p = .001^{**}$
	Both	$W = .879; p = .006^{**}$	$W = .886; p = .011^*$
	None	$W = .924; p = .027^*$	$W = .840; p = .000^{**}$
Informational	Breakfast Club	$W = .746; p = .000^{**}$	$W = .831; p = .000^{**}$
	After School Club	$W = .890; p = .002^{**}$	$W = .911; p = .008^{**}$
	Both	$W = .833; p = .001^{**}$	$W = .885; p = .010^*$
	None	$W = .920; p = .021^*$	$W = .881; p = .003^{**}$
Appraisal	Breakfast Club	$W = .801; p = .000^{**}$	$W = .719; p = .000^{**}$
	After School Club	$W = .891; p = .002^{**}$	$W = .912; p = .008^{**}$
	Both	$W = .842; p = .001^{**}$	$W = .841; p = .001^{**}$
	None	$W = .947; p = .116$	$W = .938; p = .074$
Instrumental	Breakfast Club	$W = .851; p = .001^{**}$	$W = .839; p = .001^{**}$
	After School Club	$W = .899; p = .004^{**}$	$W = .901; p = .004^{**}$
	Both	$W = .897; p = .014^*$	$W = .913; p = .040^*$
	None	$W = .964; p = .343$	$W = .938; p = .071$
Overall	Breakfast Club	$W = .865; p = .002^{**}$	$W = .874; p = .003^{**}$
	After School Club	$W = .934; p = .037^*$	$W = .950; p = .115$
	Both	$W = .905; p = .021^*$	$W = .958; p = .396$
	None	$W = .944; p = .100$	$W = .947; p = .128$

\* $p < .05$

\*\* $p < .01$

**Appendix Q (continued): Results of Shapiro-Wilk analyses  
conducted on Study 3 data**

Teacher Support Dimensions	Group	Frequency of Support Results	Importance of Support Results
Emotional	Breakfast Club	$W = .845; p = .000^{**}$	$W = .829; p = .000^{**}$
	After School Club	$W = .873; p = .001^{**}$	$W = .784; p = .000^{**}$
	Both	$W = .806; p = .000^{**}$	$W = .787; p = .000^{**}$
	None	$W = .884; p = .002^{**}$	$W = .881; p = .003^{**}$
Informational	Breakfast Club	$W = .717; p = .000^{**}$	$W = .754; p = .000^{**}$
	After School Club	$W = .839; p = .000^{**}$	$W = .869; p = .001^{**}$
	Both	$W = .815; p = .001^{**}$	$W = .800; p = .000^{**}$
	None	$W = .850; p = .000^{**}$	$W = .897; p = .006^{**}$
Appraisal	Breakfast Club	$W = .752; p = .000^{**}$	$W = .823; p = .000^{**}$
	After School Club	$W = .895; p = .003^{**}$	$W = .870; p = .001^{**}$
	Both	$W = .837; p = .001^{**}$	$W = .808; p = .001^{**}$
	None	$W = .923; p = .025^{*}$	$W = .925; p = .033^{*}$
Instrumental	Breakfast Club	$W = .816; p = .000^{**}$	$W = .865; p = .001^{**}$
	After School Club	$W = .908; p = .006^{**}$	$W = .904; p = .005^{**}$
	Both	$W = .888; p = .012^{*}$	$W = .836; p = .002^{**}$
	None	$W = .886; p = .003^{**}$	$W = .896; p = .006^{**}$
Overall	Breakfast Club	$W = .836; p = .000^{**}$	$W = .905; p = .010^{*}$
	After School Club	$W = .914; p = .008^{**}$	$W = .971; p = .473$
	Both	$W = .890; p = .013^{*}$	$W = .883; p = .013^{*}$
	None	$W = .894; p = .004^{**}$	$W = .910; p = .013^{*}$

\* $p < .05$

\*\* $p < .01$

**Appendix Q (continued): Results of Shapiro-Wilk analyses  
conducted on Study 3 data**

Best Friend Support Dimensions	Group	Frequency of Support Results	Importance of Support Results
Emotional	Breakfast Club	$W = .643; p = .000^{**}$	$W = .728; p = .000^{**}$
	After School Club	$W = .765; p = .000^{**}$	$W = .752; p = .000^{**}$
	Both	$W = .720; p = .000^{**}$	$W = .711; p = .000^{**}$
	None	$W = .769; p = .000^{**}$	$W = .867; p = .001^{**}$
Informational	Breakfast Club	$W = .719; p = .000^{**}$	$W = .802; p = .000^{**}$
	After School Club	$W = .877; p = .001^{**}$	$W = .895; p = .003^{**}$
	Both	$W = .887; p = .010^{*}$	$W = .881; p = .009^{**}$
	None	$W = .801; p = .000^{**}$	$W = .893; p = .004^{**}$
Appraisal	Breakfast Club	$W = .828; p = .000^{**}$	$W = .818; p = .000^{**}$
	After School Club	$W = .901; p = .004^{**}$	$W = .902; p = .004^{**}$
	Both	$W = .860; p = .003^{**}$	$W = .845; p = .002^{**}$
	None	$W = .781; p = .000^{**}$	$W = .909; p = .010^{*}$
Instrumental	Breakfast Club	$W = .743; p = .000^{**}$	$W = .802; p = .000^{**}$
	After School Club	$W = .878; p = .001^{**}$	$W = .860; p = .000^{**}$
	Both	$W = .866; p = .004^{**}$	$W = .832; p = .001^{**}$
	None	$W = .821; p = .000^{**}$	$W = .916; p = .016^{*}$
Overall	Breakfast Club	$W = .804; p = .000^{**}$	$W = .864; p = .002^{**}$
	After School Club	$W = .917; p = .011^{*}$	$W = .948; p = .097$
	Both	$W = .922; p = .057$	$W = .927; p = .083$
	None	$W = .826; p = .000^{**}$	$W = .940; p = .075$

\* $p < .05$

\*\* $p < .01$

**Appendix Q (continued): Results of Shapiro-Wilk analyses  
conducted on Study 3 data**

Classmate Support Dimensions	Group	Frequency of Support Results	Importance of Support Results
Emotional	Breakfast Club	$W = .927; p = .051$	$W = .867; p = .001^{**}$
	After School Club	$W = .958; p = .216$	$W = .913; p = .011^*$
	Both	$W = .965; p = .511$	$W = .900; p = .021^*$
	None	$W = .961; p = .299$	$W = .929; p = .057$
Informational	Breakfast Club	$W = .912; p = .022^*$	$W = .910; p = .015^*$
	After School Club	$W = .951; p = .129$	$W = .917; p = .014^*$
	Both	$W = .940; p = .147$	$W = .919; p = .056$
	None	$W = .908; p = .010^*$	$W = .874; p = .003^{**}$
Appraisal	Breakfast Club	$W = .904; p = .015^*$	$W = .899; p = .008^{**}$
	After School Club	$W = .951; p = .136$	$W = .896; p = .004^{**}$
	Both	$W = .949; p = .233$	$W = .908; p = .032^*$
	None	$W = .942; p = .088$	$W = .942; p = .123$
Instrumental	Breakfast Club	$W = .850; p = .001^{**}$	$W = .881; p = .003^{**}$
	After School Club	$W = .858; p = .000^{**}$	$W = .928; p = .027^*$
	Both	$W = .903; p = .021^*$	$W = .916; p = .049^*$
	None	$W = .914; p = .015^*$	$W = .926; p = .048^*$
Overall	Breakfast Club	$W = .921; p = .037^*$	$W = .925; p = .036^*$
	After School Club	$W = .963; p = .289$	$W = .942; p = .069$
	Both	$W = .956; p = .344$	$W = .946; p = .219$
	None	$W = .933; p = .049^*$	$W = .966; p = .485$

\* $p < .05$

\*\* $p < .01$

**Appendix Q (continued): Results of Shapiro-Wilk analyses  
conducted on Study 3 data**

School Community Support Dimensions	Group	Frequency of Support Results	Importance of Support Results
Emotional	Breakfast Club	$W = .889; p = .009^{**}$	$W = .787; p = .000^{**}$
	After School Club	$W = .950; p = .115$	$W = .861; p = .000^{**}$
	Both	$W = .886; p = .009^{**}$	$W = .874; p = .005^{**}$
	None	$W = .921; p = .026^*$	$W = .911; p = .012^*$
Informational	Breakfast Club	$W = .867; p = .003^{**}$	$W = .860; p = .002^{**}$
	After School Club	$W = .946; p = .084$	$W = .867; p = .001^{**}$
	Both	$W = .888; p = .010^*$	$W = .873; p = .005^{**}$
	None	$W = .927; p = .036^*$	$W = .914; p = .014^*$
Appraisal	Breakfast Club	$W = .886; p = .008^{**}$	$W = .886; p = .008^{**}$
	After School Club	$W = .912; p = .008^{**}$	$W = .918; p = .013^*$
	Both	$W = .917; p = .043^*$	$W = .935; p = .115$
	None	$W = .928; p = .038^*$	$W = .933; p = .048^*$
Instrumental	Breakfast Club	$W = .844; p = .001^{**}$	$W = .839; p = .001^{**}$
	After School Club	$W = .957; p = .187$	$W = .927; p = .023^*$
	Both	$W = .921; p = .055$	$W = .890; p = .011^*$
	None	$W = .913; p = .015^*$	$W = .935; p = .055$
Overall	Breakfast Club	$W = .901; p = .016^*$	$W = .918; p = .041^*$
	After School Club	$W = .967; p = .368$	$W = .932; p = .031^*$
	Both	$W = .942; p = .163$	$W = .958; p = .371$
	None	$W = .948; p = .139$	$W = .980; p = .792$

\* $p < .05$

\*\* $p < .01$

**Appendix Q (continued): Results of Shapiro-Wilk analyses conducted on Study 3 data**

School Engagement Dimensions	Group	Results
Emotional	Breakfast Club	$W = .921; p = .047^*$
	After School Club	$W = .947; p = .094$
	Both	$W = .894; p = .013^{**}$
	None	$W = .950; p = .153$
Behavioural	Breakfast Club	$W = .894; p = .012^*$
	After School Club	$W = .911; p = .008^{**}$
	Both	$W = .943; p = .170$
	None	$W = .961; p = .309$
Cognitive	Breakfast Club	$W = .949; p = .221$
	After School Club	$W = .942; p = .065$
	Both	$W = .928; p = .077$
	None	$W = .964; p = .366$
Overall	Breakfast Club	$W = .952; p = .252$
	After School Club	$W = .955; p = .167$
	Both	$W = .851; p = .002^{**}$
	None	$W = .898; p = .007^{**}$

\* $p < .05$

\*\* $p < .01$

## Appendix R: Median and range of scores for dimensions of social support and school engagement

**Table R1:** Median and range of scores for frequency of parental support.

		Aspects of Parental Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	17.00	17.00 <sup>c</sup>	16.50	15.00 <sup>e</sup>	65.00 <sup>a</sup>
	Range	7.00	11.00	10.00	10.00	33.00
	(Min-Max)	(11.00-18.00)	(8.00-18.00)	(8.00-18.00)	(8.00-18.00)	(39.00-72.00)
After School Club	Median	15.00	16.00	16.00	15.00 <sup>f</sup>	63.00
	Range	7.00	10.00	9.00	11.00	32.00
	(Min-Max)	(11.00-18.00)	(8.00-18.00)	(9.00-18.00)	(7.00-18.00)	(40.00-72.00)

abcdefg  $p < .0125$



**Table R1 (continued):** Median and range of scores for frequency of parental support.

		Aspects of Parental Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	16.00	17.00 <sup>d</sup>	17.00	15.00 <sup>g</sup>	64.50 <sup>b</sup>
	Range	10.00	7.00	9.00	10.00	32.00
	(Min-Max)	(8.00-18.00)	(11.00-18.00)	(9.00-18.00)	(8.00-18.00)	(40.00-72.00)
None	Median	15.00	14.00 <sup>cd</sup>	14.00	13.00 <sup>efg</sup>	58.00 <sup>ab</sup>
	Range	8.00	13.00	11.00	12.00	30.00
	(Min-Max)	(10.00-18.00)	(5.00-18.00)	(7.00-18.00)	(6.00-18.00)	(40.00-70.00)

<sup>abcde</sup><sub>efg</sub>  $p < .0125$

**Table R2:** Median and range of scores for frequency of teacher support.

		Aspects of Teacher Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	16.00	17.00	16.00	15.50	65.00
	Range	12.00	12.00	13.00	14.00	47.00
	(Min-Max)	(6.00-18.00)	(6.00-18.00)	(5.00-18.00)	(4.00-18.00)	(25.00-72.00)
After School Club	Median	16.00	17.00	14.00	15.00	59.50
	Range	9.00	11.00	14.00	13.00	43.00
	(Min-Max)	(9.00-18.00)	(7.00-18.00)	(4.00-18.00)	(5.00-18.00)	(29.00-72.00)

**Table R2 (continued):** Median and range of scores for frequency of teacher support.

		Aspects of Teacher Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	17.00	16.50	16.00	15.00	64.00
	Range	11.00	7.00	12.00	9.00	35.00
	(Min-Max)	(7.00-18.00)	(11.00-18.00)	(6.00-18.00)	(9.00-18.00)	(37.00-72.00)
None	Median	15.50	16.00	14.00	15.00	57.50
	Range	13.00	10.00	12.00	15.00	47.00
	(Min-Max)	(5.00-18.00)	(8.00-18.00)	(6.00-18.00)	(3.00-18.00)	(24.00-71.00)

**Table R3:** Median and range of scores for frequency of best friend support.

		Aspects of Best Friend Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	18.00	17.00	16.50	18.00	68.00
	Range	8.00	10.00	10.00	11.00	28.00
	(Min-Max)	(10.00-18.00)	(8.00-18.00)	(8.00-18.00)	(7.00-18.00)	(44.00-72.00)
After School Club	Median	17.00	15.50	15.00	16.00	61.50
	Range	13.00	9.00	13.00	10.00	38.00
	(Min-Max)	(5.00-18.00)	(9.00-18.00)	(5.00-18.00)	(8.00-18.00)	(34.00-72.00)

**Table R3 (continued):** Median and range of scores for frequency of best friend support.

		Aspects of Best Friend Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	17.50	16.00	16.00	16.00	63.00
	Range	12.00	8.00	12.00	8.00	32.00
	(Min-Max)	(6.00-18.00)	(10.00-18.00)	(6.00-18.00)	(10.00-18.00)	(40.00-72.00)
None	Median	17.00	16.00	16.00	15.50	66.00
	Range	15.00	15.00	12.00	15.00	55.00
	(Min-Max)	(3.00-18.00)	(3.00-18.00)	(6.00-18.00)	(3.00-18.00)	(17.00-72.00)

**Table R4:** Median and range of scores for frequency of classmate support.

		Aspects of Classmate Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	13.50	15.00	12.00	15.00	56.50
	Range	11.00	13.00	14.00	12.00	44.00
	(Min-Max)	(7.00-18.00)	(5.00-18.00)	(4.00-18.00)	(6.00-18.00)	(28.00-72.00)
After School Club	Median	13.00	12.00	12.00	15.50	51.50
	Range	13.00	15.00	13.00	12.00	51.00
	(Min-Max)	(5.00-18.00)	(3.00-18.00)	(5.00-18.00)	(6.00-18.00)	(21.00-72.00)

**Table R4 (continued):** Median and range of scores for frequency of classmate support.

		Aspects of Classmate Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	13.50	14.00	11.50	14.00	52.00
	Range	10.00	11.00	15.00	14.00	46.00
	(Min-Max)	(8.00-18.00)	(7.00-18.00)	(3.00-18.00)	(4.00-18.00)	(26.00-72.00)
None	Median	12.50	12.50	10.00	14.00	46.00
	Range	11.00	12.00	15.00	13.00	45.00
	(Min-Max)	(7.00-18.00)	(6.00-18.00)	(3.00-18.00)	(5.00-18.00)	(23.00-68.00)

**Table R5:** Median and range of scores for frequency of school community support.

		Aspects of School Community Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	13.50	15.50	15.00	16.00 <sup>a</sup>	53.50
	Range	14.00	15.00	15.00	15.00	59.00
	(Min-Max)	(4.00-18.00)	(3.00-18.00)	(3.00-18.00)	(3.00-18.00)	(13.00-72.00)
After School Club	Median	12.50	12.50	13.00	10.00	48.00
	Range	14.00	14.00	14.00	15.00	57.00
	(Min-Max)	(4.00-18.00)	(4.00-18.00)	(4.00-18.00)	(3.00-18.00)	(15.00-72.00)



**Table R5 (continued):** Median and range of scores for frequency of school community support.

		Aspects of School Community Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	14.50	14.00	13.00	10.50	54.00
	Range	15.00	15.00	15.00	15.00	60.00
	(Min-Max)	(3.00-18.00)	(3.00-18.00)	(3.00-18.00)	(3.00-18.00)	(12.00-72.00)
None	Median	10.00	10.00	10.50	9.50 <sup>a</sup>	40.00
	Range	15.00	15.00	15.00	15.00	60.00
	(Min-Max)	(3.00-18.00)	(3.00-18.00)	(3.00-18.00)	(3.00-18.00)	(12.00-72.00)

<sup>a</sup> $p < .0125$

**Table R6:** Median and range of scores for importance of parental support.

		Aspects of Parental Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	8.00	8.00	9.00 <sup>ab</sup>	7.50	31.50 <sup>c</sup>
	Range	2.00	4.00	6.00	5.00	16.00
	(Min-Max)	(7.00-9.00)	(5.00-9.00)	(3.00-9.00)	(4.00-9.00)	(20.00-36.00)
After School Club	Median	8.00	7.00	7.00 <sup>a</sup>	7.00	29.00
	Range	3.00	4.00	5.00	6.00	15.00
	(Min-Max)	(6.00-9.00)	(5.00-9.00)	(4.00-9.00)	(3.00-9.00)	(21.00-36.00)

<sup>abc</sup> $p < .0125$

**Table R6 (continued):** Median and range of scores for importance of parental support.

		Aspects of Parental Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	8.00	8.00	8.00	7.00	30.50
	Range	4.00	5.00	6.00	4.00	17.00
	(Min-Max)	(5.00-9.00)	(4.00-9.00)	(3.00-9.00)	(5.00-9.00)	(19.00-36.00)
None	Median	8.00	7.00	7.00 <sup>b</sup>	7.00	28.00 <sup>c</sup>
	Range	4.00	5.00	5.00	5.00	12.00
	(Min-Max)	(5.00-9.00)	(4.00-9.00)	(4.00-9.00)	(4.00-9.00)	(23.00-35.00)

<sup>abc</sup> $p < .0125$

**Table R7:** Median and range of scores for importance of teacher support

		Aspects of Teacher Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	8.00	9.00 <sup>a</sup>	8.00 <sup>cd</sup>	8.00	32.00 <sup>e</sup>
	Range	4.00	4.00	5.00	4.00	14.00
	(Min-Max)	(5.00-9.00)	(5.00-9.00)	(4.00-9.00)	(5.00-9.00)	(22.00-36.00)
After School Club	Median	8.00	8.00	7.00 <sup>c</sup>	7.50	30.00
	Range	6.00	3.00	4.00	4.00	15.00
	(Min-Max)	(3.00-9.00)	(6.00-9.00)	(5.00-9.00)	(5.00-9.00)	(21.00-36.00)

<sup>abcde</sup> $p < .0125$

**Table R7 (continued):** Median and range of scores for importance of teacher support

		Aspects of Teacher Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	8.50	8.00 <sup>b</sup>	8.00	8.00	32.00
	Range	3.00	4.00	5.00	6.00	16.00
	(Min-Max)	(6.00-9.00)	(5.00-9.00)	(4.00-9.00)	(3.00-9.00)	(20.00-36.00)
None	Median	7.50	7.00 <sup>ab</sup>	7.00 <sup>d</sup>	7.00	29.00 <sup>e</sup>
	Range	3.00	4.00	5.00	6.00	17.00
	(Min-Max)	(6.00-9.00)	(5.00-9.00)	(4.00-9.00)	(3.00-9.00)	(19.00-36.00)

<sup>abcde</sup> $p < .0125$

**Table R8:** Median and range of scores for importance of best friend support.

		Aspects of Best Friend Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	9.00	8.00	8.00	8.00	32.00
	Range	3.00	4.00	4.00	4.00	14.00
	(Min-Max)	(6.00-9.00)	(5.00-9.00)	(5.00-9.00)	(5.00-9.00)	(22.00-36.00)
After School Club	Median	8.00	7.00	7.00	8.00	30.00
	Range	3.00	4.00	5.00	4.00	14.00
	(Min-Max)	(6.00-9.00)	(5.00-9.00)	(4.00-9.00)	(5.00-9.00)	(22.00-36.00)

**Table R8 (continued):** Median and range of scores for importance of best friend support.

		Aspects of Best Friend Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	9.00	7.00	8.00	7.00	30.00
	Range	4.00	5.00	4.00	6.00	18.00
	(Min-Max)	(5.00-9.00)	(4.00-9.00)	(5.00-9.00)	(3.00-9.00)	(18.00-36.00)
None	Median	7.50	7.00	7.00	7.00	28.50
	Range	4.00	4.00	5.00	5.00	14.00
	(Min-Max)	(5.00-9.00)	(5.00-9.00)	(4.00-9.00)	(4.00-9.00)	(22.00-36.00)

**Table R9:** Median and range of scores for importance of classmate support.

	Aspects of Classmate Support					
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	7.00	7.00	7.00	8.00	29.00
	Range	6.00	5.00	5.00	5.00	14.00
	(Min-Max)	(3.00-9.00)	(4.00-9.00)	(4.00-9.00)	(4.00-9.00)	(22.00-36.00)
After School Club	Median	7.00	7.00	6.00	7.00	26.50
	Range	5.00	6.00	5.00	5.00	17.00
	(Min-Max)	(4.00-9.00)	(3.00-9.00)	(4.00-9.00)	(4.00-9.00)	(19.00-36.00)



**Table R9 (continued):** Median and range of scores for importance of classmate support.

		Aspects of Classmate Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	7.00	7.00	7.00	7.00	26.50
	Range	6.00	6.00	6.00	6.00	24.00
	(Min-Max)	(3.00-9.00)	(3.00-9.00)	(3.00-9.00)	(3.00-9.00)	(12.00-36.00)
None	Median	7.00	7.00	6.00	7.00	26.50
	Range	5.00	4.00	5.00	5.00	15.00
	(Min-Max)	(4.00-9.00)	(5.00-9.00)	(4.00-9.00)	(4.00-9.00)	(20.00-35.00)

**Table R10:** Median and range of scores for importance of school community support.

	Aspects of School Community Support					
		Emotional	Informational	Appraisal	Instrumental	Overall
Breakfast Club	Median	8.00	7.00	7.00	7.50 <sup>a</sup>	29.00
	Range	5.00	5.00	6.00	6.00	19.00
	(Min-Max)	(4.00-9.00)	(4.00-9.00)	(3.00-9.00)	(3.00-9.00)	(17.00-36.00)
After School Club	Median	8.00	7.50	7.00	7.00 <sup>b</sup>	28.00
	Range	5.00	6.00	6.00	6.00	23.00
	(Min-Max)	(4.00-9.00)	(3.00-9.00)	(3.00-9.00)	(3.00-9.00)	(13.00-36.00)

<sup>ab</sup> $p < .0125$

**Table R10 (continued):** Median and range of scores for importance of school community support.

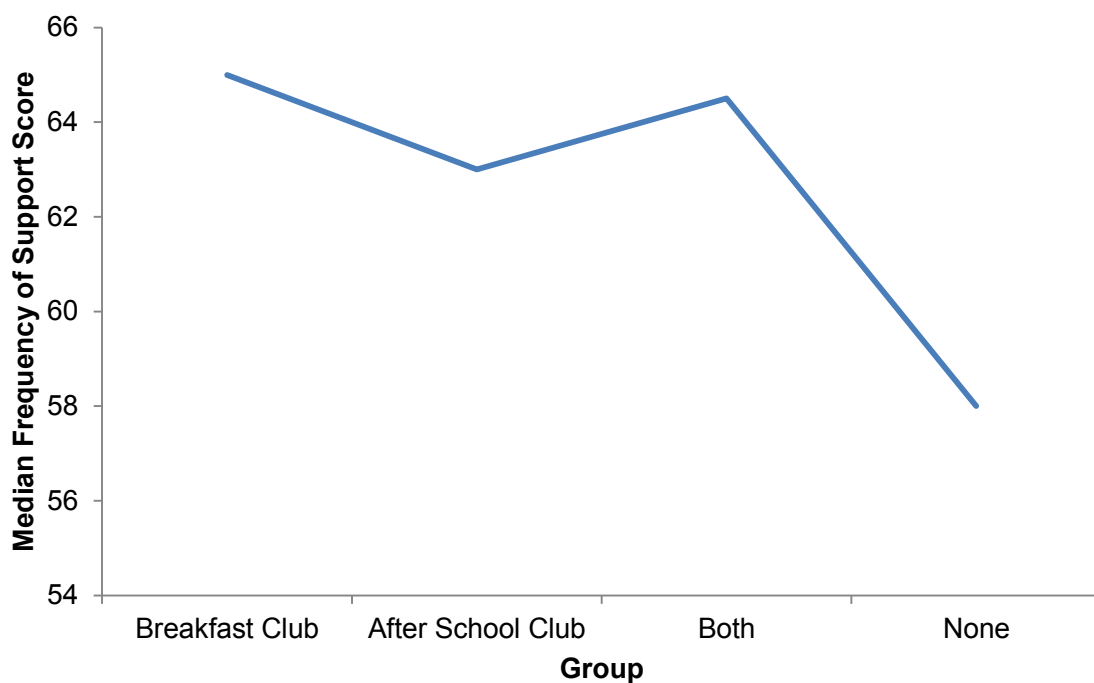
		Aspects of School Community Support				
		Emotional	Informational	Appraisal	Instrumental	Overall
Both	Median	8.00	7.00	7.00	6.00	28.00
	Range	6.00	6.00	5.00	6.00	22.00
	(Min-Max)	(3.00-9.00)	(3.00-9.00)	(4.00-9.00)	(3.00-9.00)	(14.00-36.00)
None	Median	6.00	6.00	6.00	6.00 <sup>ab</sup>	25.50
	Range	6.00	5.00	5.00	6.00	22.00
	(Min-Max)	(3.00-9.00)	(4.00-9.00)	(4.00-9.00)	(3.00-9.00)	(14.00-36.00)

<sup>ab</sup> $p < .0125$

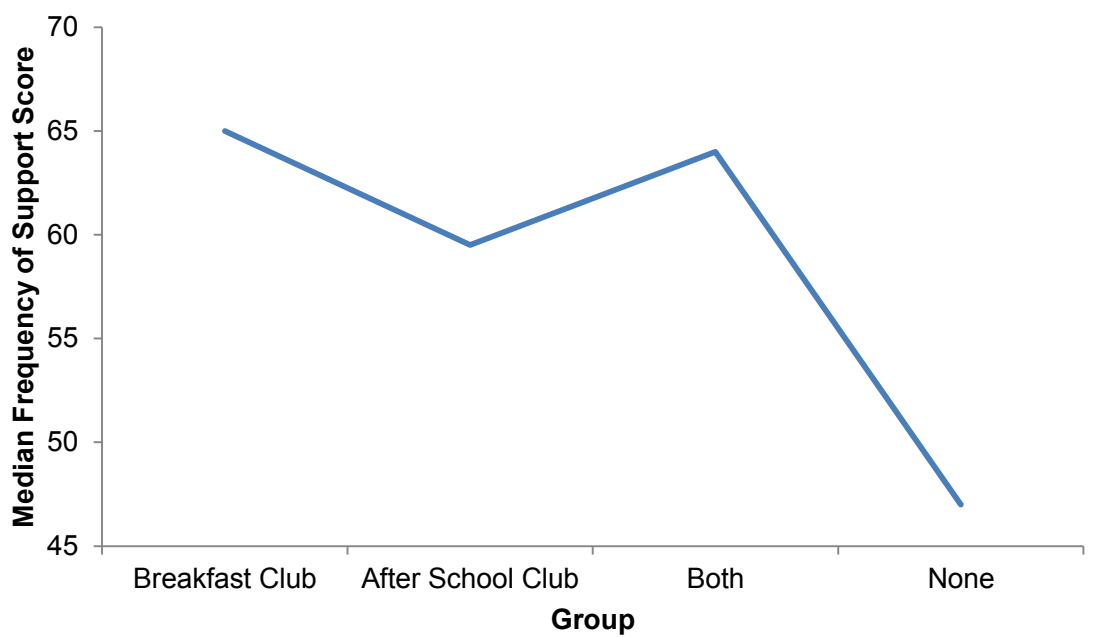
**Table R11:** Median and range of scores for school engagement.

	Aspects of School Engagement				
		Behavioural	Cognitive	Emotional	Overall
Breakfast Club	Median	21.00	30.00	23.00	75.50
	Range	16.00	28.00	19.00	48.00
	(Min-Max)	(9.00-25.00)	(12.00-40.00)	(11.00-30.00)	(47.00-95.00)
After School Club	Median	19.00	29.50	23.00	73.00
	Range	11.00	28.00	20.00	51.00
	(Min-Max)	(14.00-25.00)	(10.00-38.00)	(10.00-30.00)	(41.00-92.00)
Both	Median	20.00	32.00	24.00	77.00
	Range	14.00	29.00	23.00	62.00
	(Min-Max)	(11.00-25.00)	(11.00-40.00)	(7.00-30.00)	(29.00-91.00)
None	Median	19.00	26.50	22.50	71.00
	Range	9.00	25.00	23.00	42.00
	(Min-Max)	(15.00-24.00)	(13.00-38.00)	(7.00-30.00)	(41.00-83.00)

**Appendix S: Trends in Overall Frequency of Support, Importance of Support and School Engagement data**

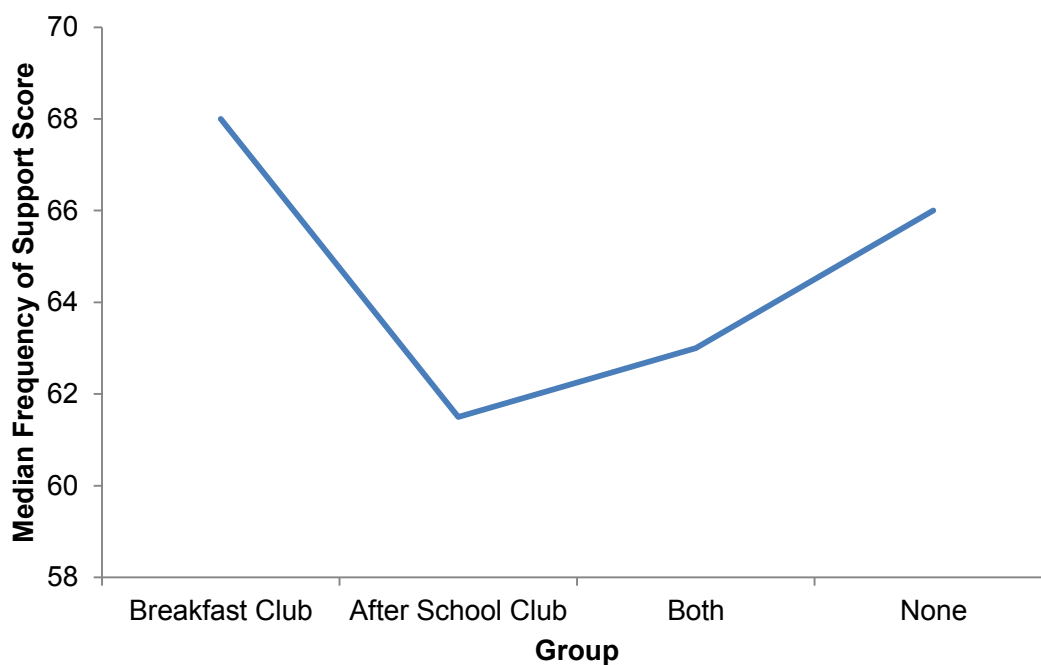


**Figure Si: Overall frequency of parental support.**

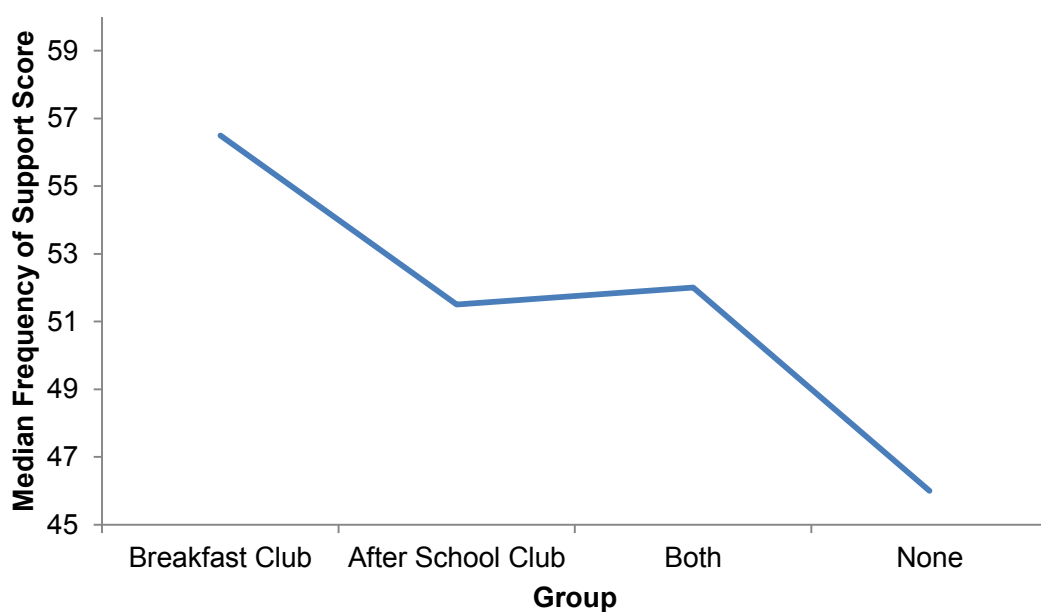


**Figure Sii: Overall frequency of teacher support.**

**Appendix S (continued): Trends in Overall Frequency of Support, Importance of Support and School Engagement data**



**Figure Siii: Overall frequency of best friend support.**

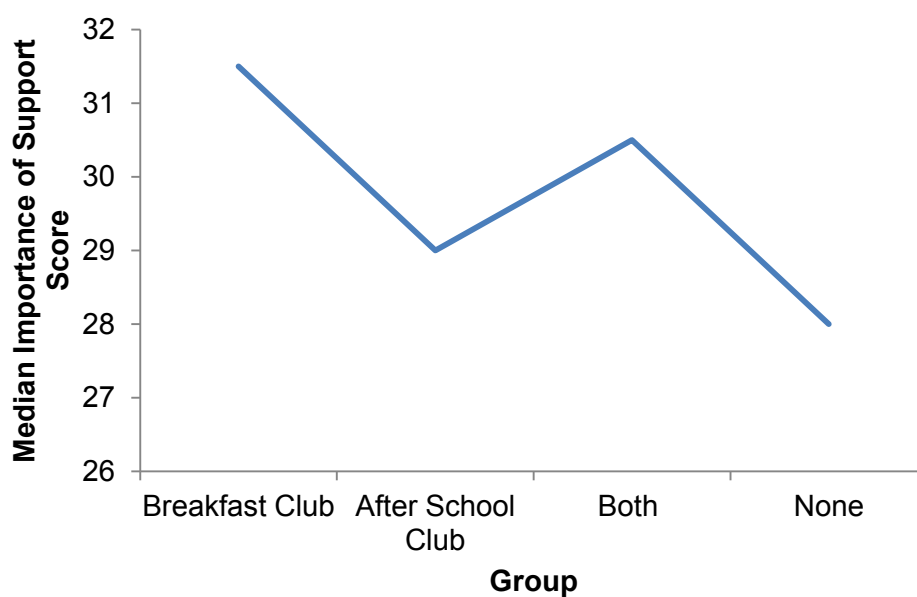


**Figure Siv: Overall frequency of classmate support.**

**Appendix S (continued): Trends in Overall Frequency of Support, Importance of Support and School Engagement data**

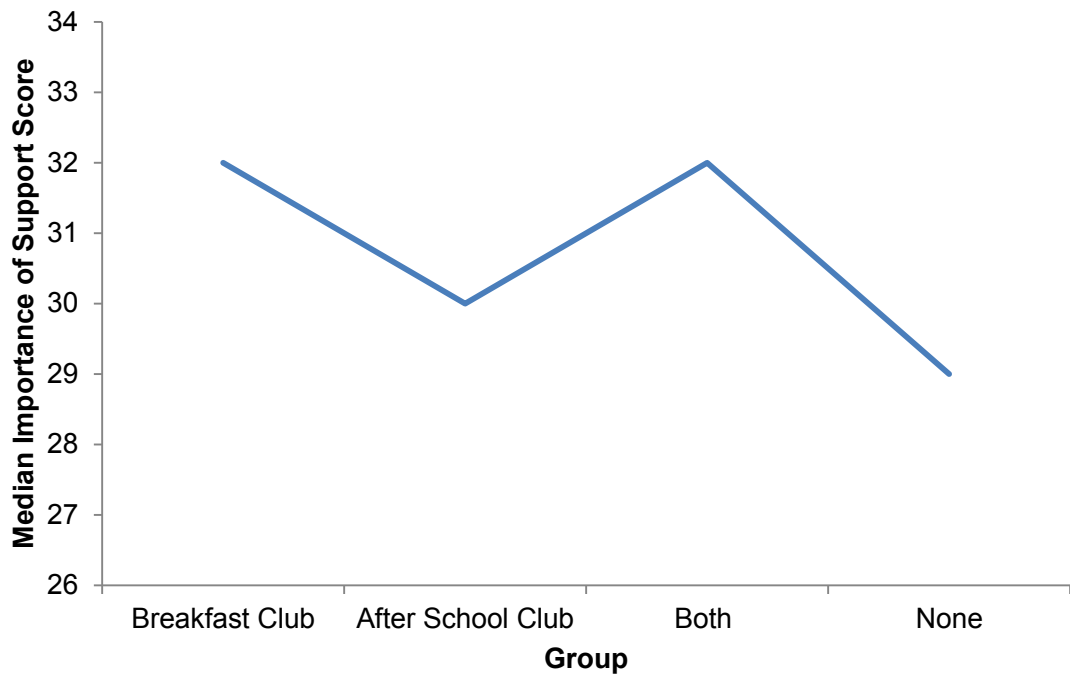


**Figure Sv: Overall frequency of school community support.**

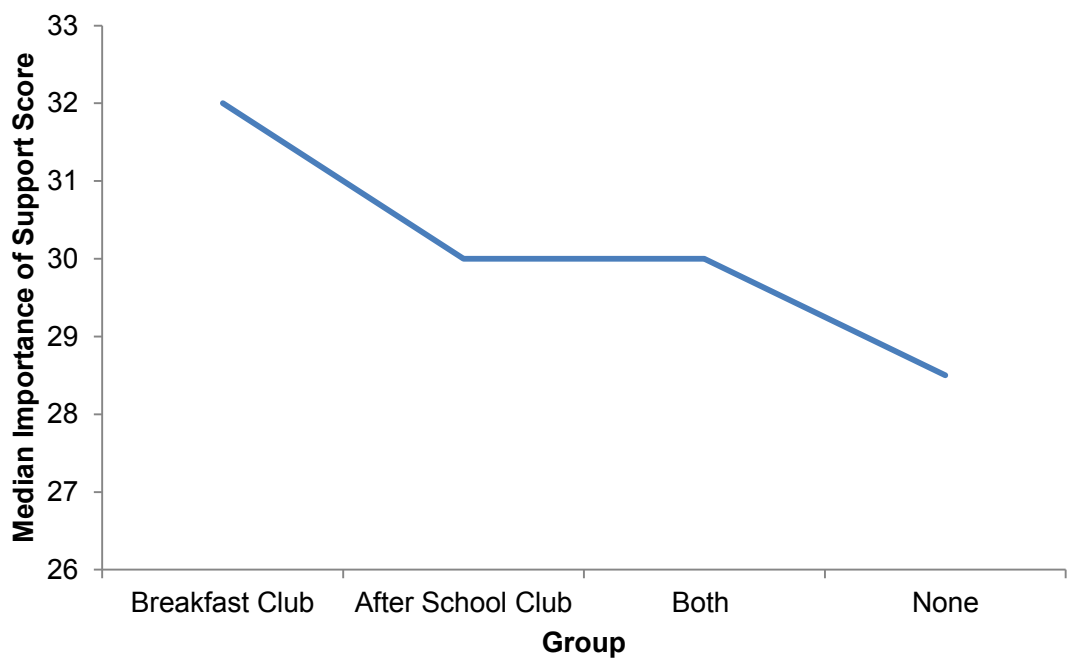


**Figure Svi: Overall importance of parental support.**

**Appendix S (continued): Trends in Overall Frequency of Support, Importance of Support and School Engagement data**



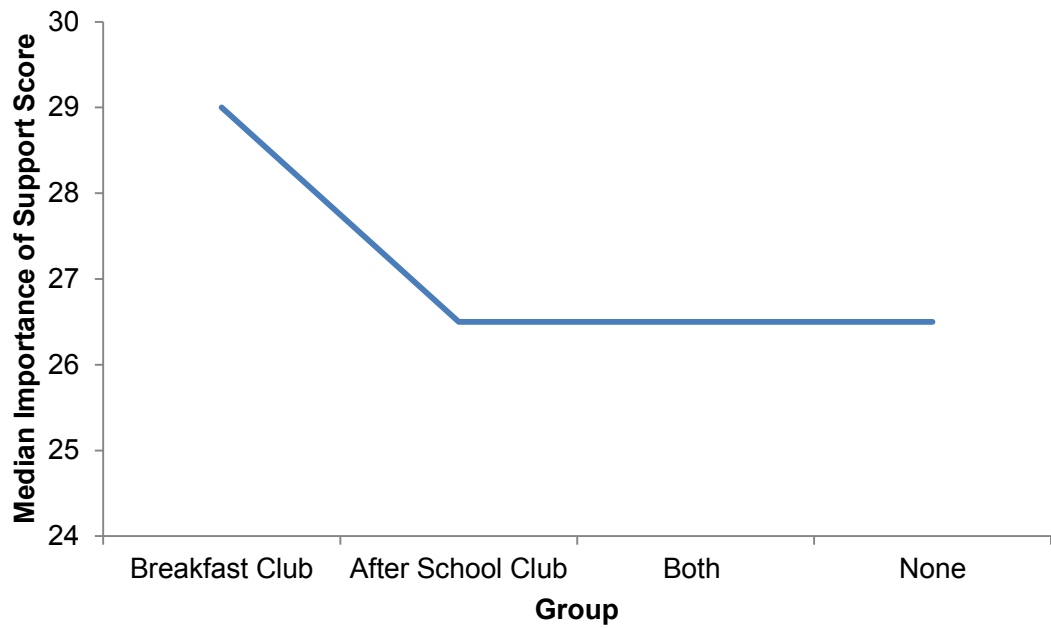
**Figure Svii: Overall importance of teacher support.**



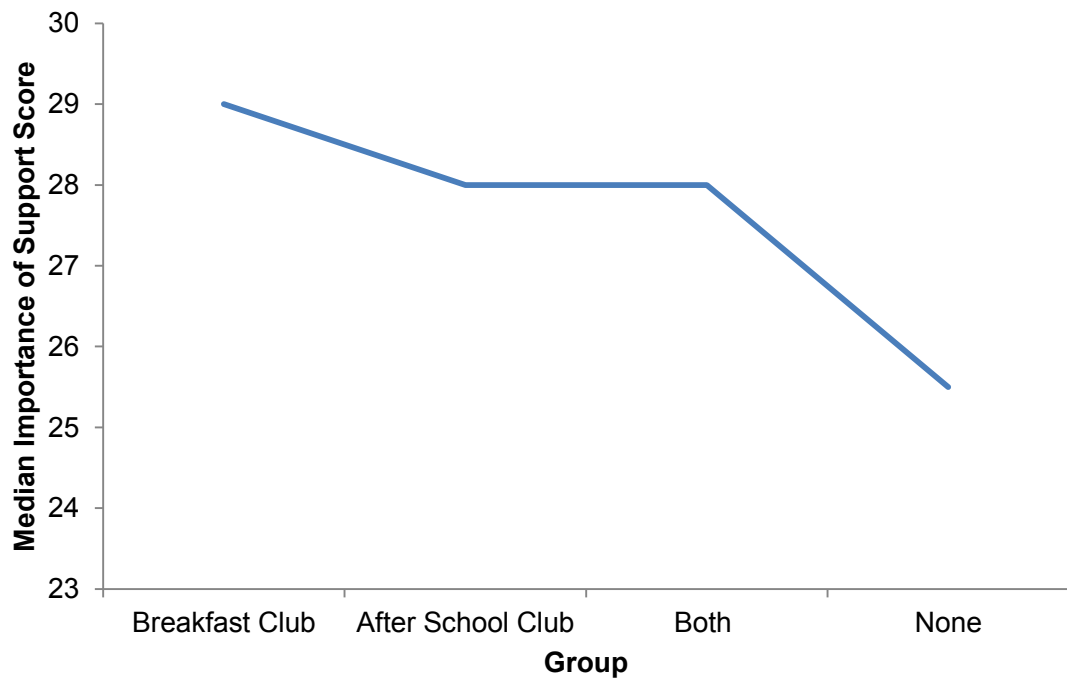
**Figure Sviii: Overall importance of best friend support.**



**Appendix S (continued): Trends in Overall Frequency of Support, Importance of Support and School Engagement data**

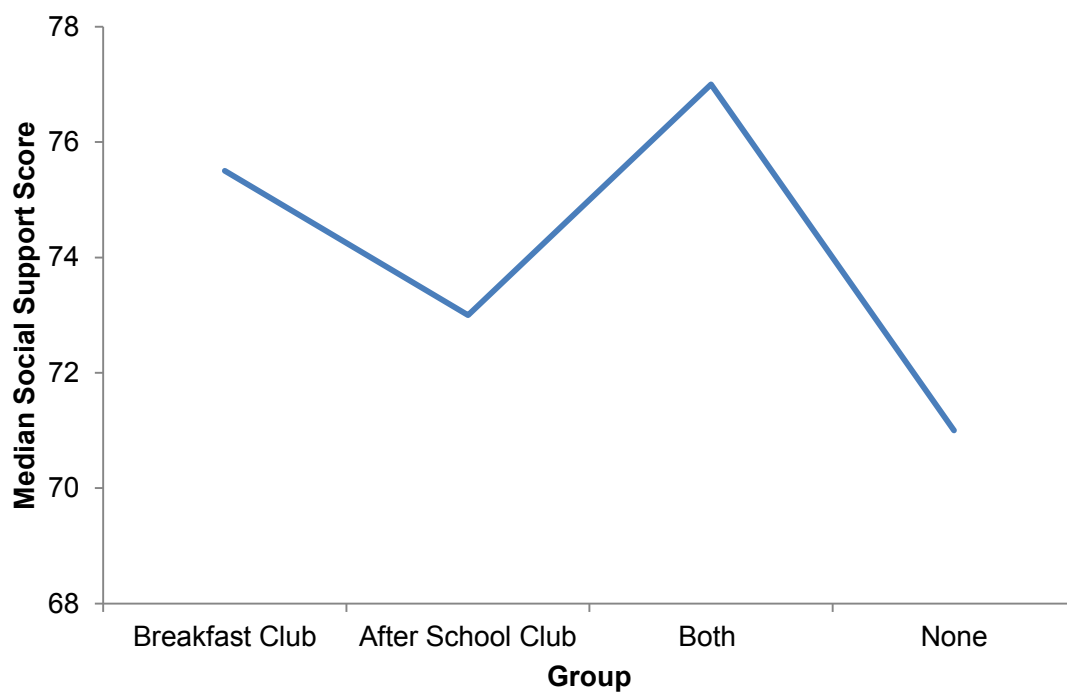


**Figure Six: Overall importance of classmate support.**



**Figure S: Overall importance of school community support.**

**Appendix S (continued): Trends in Overall Frequency of Support, Importance of Support and School Engagement data**



**Figure Si: Overall school engagement.**

## Appendix T: Online Questionnaire Worksheet

Name:.....

I would really like to find out what children think about breakfast and what they do each day before school starts.



Would you like to help me?

Have a look inside to find out what to do next...

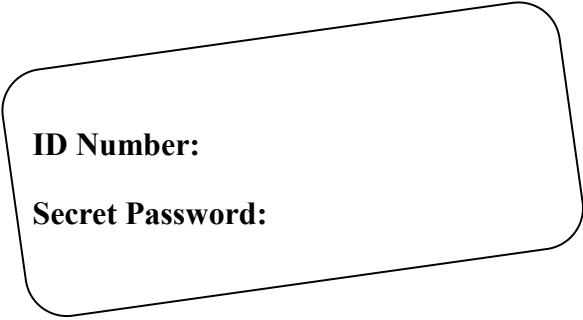
## Appendix T (continued): Online Questionnaire Worksheet

What do you think about breakfast?

To help me find out what children think about breakfast you will need to go to:

[web address]

Here is your ID number and secret password...



**ID Number:**  
**Secret Password:**

Sssshhh! This is your ID number and password. These are top secret so don't share them with any other children in your school or you won't be able to get onto the task online.

You only need to do this task once. When you have finished the task you will be given a secret code word on the screen. Write your code word in the box below.



## Appendix T (continued): Online Questionnaire Worksheet

What do you do before school?

To help me find out about what children do each day before school starts you will need to go to:

[web address]

Before you can see what the questions are this time, you will need to enter your ID Number like before but you will also need to enter the secret code word that you wrote down at the end of the last task.

If you don't know your code word, you can ask your teacher to remind you what it is.

You will need to complete this task on 5 school days. These don't need to be 5 school days in a row but please try to fill in all the days by [date].

After you have completed the task each day, put a smiley face in the box under the day that you've done the task

Monday

☐

Tuesday

☐

Wednesday

☐

Thursday

☐

Friday

☐

Finished?

Well done!

Thank you for all  
your help.

## **Appendix U: Breakfast Attitude Questionnaire**

What do you think about eating breakfast?

---

Enter Your Password

**To be able to join in this project, the person you live with must have said that it is okay for you to take part.**

**If they said it's okay then you should have a password to unlock the questions. Please enter your password below.**

**If you don't have a password then I'm sorry but you won't be able to take part.**

---

What will I have to do?

**I would really like to find out what children think about eating breakfast. To help me find out about this, I am looking for some children to answer some questions about eating breakfast.**

**Children think different things about eating breakfast so there are no right or wrong answers to any of these questions, I would just like to know what you think.**

**Your name will not be on any of the answers you give. You will use an ID number instead of your name so no one will know which answers are yours.**

**If you decide to have a go at the questions but then you change your mind, you can stop answering at any time by clicking on the cross in the corner of the screen.**

Click next to see what the questions will look like...

---

What will the questions look like?

If you would like to help me find out about what children think about eating breakfast you will be asked to answer 13 questions that look like this...

## Appendix U (continued): Breakfast Attitude Questionnaire

### Eating breakfast keeps you healthy

*You should choose one answer for each sentence.*

*Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

Would you like to have a go?

**Would you like to have a go at answering the questions about eating breakfast?\***

☐ Yes

☐ No

---

You Ticked Yes!

You've chosen to help me to find out what children think about eating breakfast.

Thank you! :)

Please start by filling in the information below. This information will only be used to let me see who has answered all the questions.

ID Number\*



## Appendix U (continued): Breakfast Attitude Questionnaire

Age\*

---

School\*

---

Today's date is\*

---

---

Question 1

**I usually eat healthy foods for breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

## Appendix U (continued): Breakfast Attitude Questionnaire

### Question 2

#### **I often miss breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 3

#### **It's okay to miss breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 4

#### **I hardly eat anything for breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

## Appendix U (continued): Breakfast Attitude Questionnaire

☐ Disagree a lot

---

### Question 5

**I hate eating breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 6

**I usually eat unhealthy foods for breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 7

**I can concentrate in class even when I've missed breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

## Appendix U (continued): Breakfast Attitude Questionnaire

- ☐ Agree a bit
  - ☐ Don't agree or disagree
  - ☐ Disagree a bit
  - ☐ Disagree a lot
- 

### Question 8

**I usually have a snack at morning break instead of breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.  
Disagree means that you don't think the sentence sounds like you or what you think.*

- ☐ Agree a lot
  - ☐ Agree a bit
  - ☐ Don't agree or disagree
  - ☐ Disagree a bit
  - ☐ Disagree a lot
- 

### Question 9

**I feel okay in the mornings even if I haven't eaten breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.  
Disagree means that you don't think the sentence sounds like you or what you think.*

- ☐ Agree a lot
- ☐ Agree a bit
- ☐ Don't agree or disagree
- ☐ Disagree a bit
- ☐ Disagree a lot

## Appendix U (continued): Breakfast Attitude Questionnaire

---

### Question 10

**Eating breakfast is boring\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 11

**I'd rather have a snack at morning break than eat breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

### Question 12

**If I miss breakfast I feel more tired in the morning\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

## Appendix U (continued): Breakfast Attitude Questionnaire

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

Question 13

**I usually eat a good breakfast\***

*Remember... Agree means that you think the sentence sounds like you or what you think.*

*Disagree means that you don't think the sentence sounds like you or what you think.*

☐ Agree a lot

☐ Agree a bit

☐ Don't agree or disagree

☐ Disagree a bit

☐ Disagree a lot

---

What's next?

**Well done!**

**You've completed the first part of this project.**

**Great job!**

## **Appendix U (continued): Breakfast Attitude Questionnaire**

For the next part of this project I would really like to find out about what children do in the morning before school starts.

Can you help me?

If you would like to have a go, you will be asked to answer some questions about what you do on 5 school mornings. Your secret code word for the next part of the project is:

morning

Remember, this code word is top secret so write it on your sheet and don't show it to any other children in your school.

You will find the next questions at [web address]

## Appendix V: Morning Routine Diary

Well done on completing the first task that asked you what you think about breakfast. At the end of the task you were given a secret code word to write down on your sheet. Please type in your secret code word below to unlock the next task.

I'm sorry but if you haven't got a secret code word, you won't be able to do the task.

---

### What will I have to do?

I would really like to find out what children do in the morning before school starts. To help me find out about this I am looking for some children to answer some questions about what they do in the morning before school starts. If you decide to have a go at the task it would be great if you could remember to answer the questions on 5 school days.

Children do lots of different things before the start of school so there are no right or wrong answers to any of the questions; I would just like to find out what you think.

Your name will not be on any of the information you give. Just like before you will use your ID number instead of your name so no one will know which answers are yours.

If you decide to have a go at the questions but then change your mind you can stop answering at anytime by just clicking on the cross in the corner of the screen.

Click next to see what the questions will look like...

---

### What will the questions look like?

If you decide to have a go at this task, some of the questions will ask you just to tick a box to give your answer, like this...

Did you get to school on time this morning?

☐ Yes

☐ No

...and some of the questions will ask you to type something in, like this...



## Appendix V (continued): Morning Routine Diary

Who did you see when you got to school? Please type their names here:

--

Don't worry if you have to type something and you aren't sure about the spelling.  
You can ask someone to help you or just have a go.

-----

### Would you like to have a go?

Would you like to have a go at answering the questions about the things you do in the morning before school starts?

☐ Yes

☐ No

-----

### You ticked yes!

You've chosen to help me find out what children do in the morning before the start of school.

Thank you! 😊

Please start by filling in the information below. This information will only be used to help me see who has answered all of the questions.

ID Number\*

\_\_\_\_\_

Age\*

\_\_\_\_\_

School\*

\_\_\_\_\_

## Appendix V (continued): Morning Routine Diary

Today's date is\*

---

---

### Question 1

What did you do at home this morning?

☐ Got ready to come to school

☐ Watched television

☐ Read

☐ Played on computer

☐ Something else: Please type in what other things you did at home this morning

---

### Question 2

After you woke up this morning did you have anything to eat or drink before you left your house?

☐ Yes

☐ No

---

Please type in everything you had to eat and drink at home this morning:

*Remember, it doesn't matter if you're not sure how to spell something; you can ask someone to help you or just have a go.*

---

## Appendix V (continued): Morning Routine Diary

### Question 3

Did you go to anyone else's house this morning before you got to school?

☐ Yes

☐ No

-----  
Whose house did you go to?

☐ I went to see my friend

☐ I went to see someone from my family

☐ I went to see my parent's friend

☐ I went to see someone else Please type in who you went to see.....

Did you have anything to eat or drink while you were there?

☐ Yes

☐ No

Please type in everything you had to eat and drink while you were there:

*Remember, it doesn't matter if you're not sure how to spell something; you can ask someone to help you or just have a go.*

-----  

### Question 4

How did you travel to school this morning?

☐ Walked

☐ Bus

☐ Car

☐ Bike or scooter

## Appendix V (continued): Morning Routine Diary

---

### Question 5

Did you stop off at a shop this morning on your way to school?

☐ Yes

☐ No

---

-

Did you have anything to eat or drink that was bought from the shop?

☐ Yes

☐ No

Please type in everything you had to eat and drink that was bought from the shop you stopped at

*Remember, it doesn't matter if you're not sure how to spell something; you can ask someone to help you or just have a go.*

--

---

### Question 6

Did you go to breakfast club this morning?

☐ Yes

☐ No

---

Please type in everything you had to eat and drink while you were at breakfast club this morning

*Remember, it doesn't matter if you're not sure how to spell something; you can ask someone to help you or just have a go.*

--

## Appendix V (continued): Morning Routine Diary

---

### Question 7

Wow! You've done a great job! Just one more question to go.

Think very carefully. Did you have anything else to eat or drink between waking up this morning and the start of school that you haven't mentioned already?

☐ Yes

☐ No

---

Please type in anything else you've had to eat and drink between waking up this morning and the start of school that you haven't mentioned already

*Remember, it doesn't matter if you're not sure how to spell something; you can ask someone to help you or just have a go.*

--

Excellent! You've finished your task for today. Well done!

Remember to come back and answer these questions each day until you've filled in all the boxes on your sheet with smiley faces 😊

Once you have 5 smiley faces 😊 on your sheet, I will contact you to say a BIG thank you for all your help with my work.

**Appendix W: Results of Shapiro-Wilk analyses conducted on Study 4 data**

Breakfast Score	Overall (Across Both Schools)		School 1		School 2	
	Attendees	Non-attendees	Attendees	Non-attendees	Attendees	Non-attendees
Overall Healthy	$W = .893$ ; $p = .000^{**}$	$W = .841$ ; $p = .000^{**}$	$W = .899$ ; $p = .005^{**}$	$W = .832$ ; $p = .006^{**}$	$W = .784$ ; $p = .000^{**}$	$W = .856$ ; $p = .008^{**}$
Overall Unhealthy	$W = .492$ ; $p = .000^{**}$	$W = .576$ ; $p = .000^{**}$	$W = .577$ ; $p = .000^{**}$	$W = .548$ ; $p = .000^{**}$	$W = .358$ ; $p = .000^{**}$	$W = .549$ ; $p = .000^{**}$
Home Healthy	$W = .821$ ; $p = .000^{**}$	$W = .841$ ; $p = .000^{**}$	$W = .786$ ; $p = .000^{**}$	$W = .832$ ; $p = .006^{**}$	$W = .864$ ; $p = .002^{**}$	$W = .856$ ; $p = .008^{**}$
School Healthy	N/A	N/A	$W = .813$ ; $p = .000^{**}$	N/A	$W = .851$ ; $p = .001^{**}$	N/A

**\*\*** $p < .01$

## Appendix X: Median and range of scores for Study 4

**Table X1:** Descriptive statistics for school breakfast attendees and non-attendees collapsed across schools.

	School Breakfast Attendees		Non-Attendees	
	(N=62)		(N=36)	
Breakfast	<i>Median</i>	<i>Range</i>	<i>Median</i>	<i>Range</i>
Category		<i>(Min-Max)</i>		<i>(Min-Max)</i>
Overall	2.00 <sup>a</sup>	5.00	1.00 <sup>a</sup>	4.00
Healthy		(0.00-5.00)		(0.00-4.00)
Overall	1.00	3.00	0.00	2.00
Unhealthy		(0.00-3.00)		(0.00-2.00)

<sup>ab</sup> $p < 0.05$

**Table X2:** Descriptive statistics for school breakfast attendees and non-attendees from School 1 and School 2.

	School 1				School 2			
	School Breakfast		Non-Attendees		School Breakfast		Non-Attendees	
	Attendees		(N=17)		Attendees		(N=19)	
	(N=33)				(N=29)			
Breakfast	Median	Range	Median	Range	Median	Range	Median	Range
Categories		(Min-Max)		(Min-Max)		(Min-Max)		(Min-Max)
Overall	1.00 <sup>a</sup>	5.00	1.00	3.00	2.00 <sup>ab</sup>	5.00	1.00 <sup>b</sup>	3.00
Healthy		(0.00-5.00)		(0.00-3.00)		(0.00-5.00)		(0.00-3.00)
Overall	0.00	2.00	0.00	2.00	0.00	2.00	0.00	2.00
Unhealthy		(0.00-2.00)		(0.00-2.00)		(0.00-2.00)		(0.00-2.00)

<sup>ab</sup> $p < 0.05$



**Table X2 (continued):** Descriptive statistics for school breakfast attendees and non-attendees from School 1 and School 2.

Breakfast Categories	School 1				School 2			
	School Breakfast		Non-Attendees		School Breakfast		Non-Attendees	
	Attendees		(N=17)		Attendees		(N=19)	
	(N=33)				(N=29)			
	Median	Range	Median	Range	Median	Range	Median	Range
		(Min-Max)		(Min-Max)		(Min-Max)		(Min-Max)
Home	1.00	2.00	N/A	N/A	1.00	3.00	N/A	N/A
Healthy		(0.00-2.00)				(0.00-3.00)		
School	1.00	3.00	N/A	N/A	1.00	3.00	N/A	N/A
Healthy		(0.00-3.00)				(0.00-3.00)		

**Appendix Y: Results of Shapiro-Wilk analyses conducted on Study 5 data**

<b>Behaviour Score</b>	<b>Results</b>
Beginning	$W = .253; p = .000^{**}$
Middle	$W = .377; p = .000^{**}$
End	$W = .520; p = .000^{**}$

$^{**}p < .01$

<b>Behaviour</b>	<b>Room</b>	<b>Results</b>
Positive	Breeakfast Club	$W = .617; p = .000^{**}$
	Hall	$W = .746; p = .000^{**}$
Negative	Breakfast Club	$W = .616; p = .000^{**}$
	Hall	$W = .746; p = .000^{**}$

$^{**}p < .01$

# Breakfast clubs: availability for British schoolchildren and the nutritional, social and academic benefits

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**Summary** Breakfast clubs are not a new resource for parents and children, but interest in them has heightened, because of both the need for improvement in school food and political interest in their availability across the devolved countries. It has been suggested that concrete scientific evidence as to their benefits to academic performance be required before a breakfast club should be available for children across the UK. It is inappropriate to correlate crude measures such as Standard Assessment Test (SAT) scores and exam results with breakfast club provision, and the focus of analysis should be individual pupil benefit (both scholastically and socially), nutrient intake, meal provision and even assisting working parents with child care. There is limited data available to investigate the adequacy of food provision in school breakfast clubs, but there is now sufficient information available for breakfast club organisers to provide a nutritionally balanced breakfast. A body of evidence is emerging that demonstrates the benefits of breakfast club attendance to mental performance and social development. However, it is unclear whether such benefits are derived from the consumption of breakfast *per se*, the environment or a combination of the two. It is reasonably safe to conclude that the benefits of breakfast clubs are more pronounced in deprived areas, and efforts of charities to support breakfast clubs should focus in these areas. Given the role and importance of school breakfast clubs, ContinYou, a leading national charity, pledged support in establishing 200 more school breakfast clubs over 2009 and 2010.

**Keywords:** breakfast, nutrition, behaviour, cognition, school

## What is a breakfast club and how many are there?

There are many different types of breakfast clubs, but in general, they all provide:

- a safe supervised place for young people to go in the morning before the start of the school/college day;
- a breakfast meal to support good nutrition and health;
- social, emotional and pastoral support to young people;
- a range of informal activities and things to do that support learning and skills development.

The Welsh Assembly Government made a commitment to provide for all children of primary school age registered in maintained primary schools in Wales a free, healthy breakfast at the start of each school each day. While it is optional for schools in Wales to take up the offer, for those who wish to do so, it is entirely funded by the Welsh Assembly Government. There is no charge to the school or to the parents of attendees.

Schools in England, Scotland and Northern Ireland are governed by different legislation; breakfast clubs are either self-funded via food sales or supported by charities or food business such as Gregg's or Nairns. The largest network of support comes from the charity ContinYou. Since 1998, ContinYou has been able to invest over £1 million to support the sustainable development of breakfast clubs throughout the UK and, as part of that

investment, directly fund, through awards and grants programmes, over 450 clubs that provide 1 million breakfasts per year. There are no formal statistics regarding the actual number of breakfast clubs available in the UK, and of the schools that provide breakfast clubs, even less is known about the relative proportion of pupils attending such clubs. ContinYou is currently undertaking a survey in order to provide accurate data concerning the number of school breakfast clubs operating across the UK; the results of which should be available later in 2010. ContinYou have also committed to creating 200 new, sustainable breakfast clubs over 2009 and 2010 through its Master Class Grant Programme. Breakfast clubs are organised in ways to suit individual schools and their facilities. There are a range of different models used by schools and community settings. The *Tea and Toast* model is a basic breakfast bar set up where access to catering and cooking equipment is limited and/or impossible, often in a classroom, library or 'games' room. Under this model, a makeshift food preparation area is arranged offering a simple breakfast. Alternatively, there are server or canteen models that can offer a wider variety of foods on a more formal basis. Regardless of whichever model is used or adapted, clubs are given clear guidance to ensure that they observe safe food handling and preparation, and staff undertake validated food safety and hygiene training to support this.

### **Food guidelines and nutrient standards for breakfast clubs**

Provision of food in schools across the UK is covered by the following legislation: England Statutory Instruments 2007 No. 2359, the Education (Nutritional Standards and Requirements for School Food) (England) Regulations 2007. For Wales, there are two documents that relate to Appetite for Life: the Appetite for Life Action plan launched in November 2007 and the draft implementation guidelines (version 2), which is a 'practical' working document. Appetite for Life aims to make the food offered throughout the school day healthier. It introduces more stringent nutritional standards, which exceed the current minimum compulsory standards, set out in the Education (Nutritional Standards for School Lunches) (Wales) Regulations 2001 for school lunches and other foods served throughout the school day. The standards set out in Appetite for Life are recommended standards; the Welsh Local Government Association is encouraging all school meal providers to work towards implementing these standards as soon as possible. To help with implementing the recommended standards in Appetite for Life, the Welsh Local Government Association have produced the draft implementation guidelines (currently version 2), which can be downloaded from their website pages. Appetite for Life is still in the development and implementation stages, which means that some of the standards might change or be amended. Therefore, it is very important that those working to the standards in Wales check the website regularly and refer to the most up-to-date information on the website <http://www.physicalactivityandnutritionwales.org.uk/page.cfm?orgid=740&pid=29573>. For Scotland, the legislation is Statutory Instrument No. 265, 2008, The Nutritional Requirements for Food and Drink in Schools (Scotland) Regulations 2008. Finally, for Northern Ireland, Articles 58 and 59 of the Education and Libraries (NI) Order 1986 were used, as amended. There are some nuances in the legislation (e.g. the Scottish regulations allow oat cakes to be served during breaks). But in general, the legislation is the same for all breakfast clubs across the UK. Staff or organisers of breakfast clubs are often members of school or wider workforce staff, and may include parents or teachers who otherwise have little involvement with food provision in schools. The legislation and guidelines from the School Food Trust (England) are easy to find online, but the people who staff breakfast clubs have very little time or resource to source, read and utilise the legislation. It is for this reason that ContinYou have developed and compiled a guidebook, a quick reference guide and posters for use by breakfast club staff. These guidelines were collated by expert, independent nutritionists and dieticians from the British Dietetic Association, the British Nutrition Foundation and local councils. The School Food Trust have also checked these guidelines for compliance with the relevant legislation, and these resources are available on the ContinYou website.

### **Nutritional benefits of breakfast and breakfast clubs**

Breakfast is often cited as the most important meal of the day. The importance of breakfast consumption has been acknowledged by the Food Standards Agency as it features as one of their eight tips for eating well. Research has shown that breakfast is a key factor in helping to ensure nutritional adequacy in school-aged children (Chitra & Reddy 2007). Hence, it is

hardly surprising that children who habitually consume breakfast tend to have better nutritional profiles compared with children who habitually skip breakfast (Williams *et al.* 2009). There is a large body of evidence that shows skipping breakfast is associated with increased levels of snack food consumption (Billon *et al.* 2002) and an increased likelihood of being overweight or obese (De La Hunty and Ashwell 2007). Children who eat breakfast have better micronutrient intake and status, and around 20% of the key micronutrients – B vitamins and iron – come from breakfast cereals. Furthermore, children who skip breakfast do not make up for the nutrients lost during the day (Gibson 2003). Research shows that people who eat breakfast cereals usually have lower fat diets (Kirk *et al.* 1997), and eating a high-fibre cereal for breakfast reduces the amount of energy eaten not only during breakfast but also at lunch time (Levine *et al.* 1989). Given the above findings, breakfast skipping is still rife in UK children. A Taylor Nelson Sofres Family Food Panel found that 13% of 0–10 year olds and 19% of 11–16 year olds miss breakfast each day. The finding that omission of breakfast is more commonly observed in children of lower socio-economic status (SES) parents (*e.g.* Hulshof *et al.* 2003) has potential implications for inequalities in health, which may in turn contribute to inequalities in educational attainment (Leganger & Kraft 2003). Although, breakfast skipping is more commonly observed in children of lower SES parents, Bidgood and Cameron (1992) found that one of the most common reasons given for skipping breakfast was lack of time, with less than 1% of respondents stating that they skipped breakfast because of lack of money or food. Similarly, Singleton and Rhoads (1982) and Zullig *et al.* (2006) found that the most common reasons for skipping breakfast were lack of time, not being hungry and not getting enough sleep. There is little doubt that increases in the number of women in the workforce and increases in hours worked have altered the eating patterns of many families (Basrur 1998). As a result, children from all types of socio-economic backgrounds may now be at risk for skipping breakfast (Siega-Riz *et al.* 1998), and recent research has shown that many children arrive at school hungry (Elgar *et al.* 2005). These findings suggest that school breakfast programmes should be universal, rather than targeting certain groups of children (Gleason 1995). However, as the lower SES groups appear to skip breakfast more frequently, schools in these areas could be targeted as a priority.

### **Nutritional quality of breakfast provided – is there a best breakfast for the brain?**

In a recent systematic review of the evidence, Hoyland *et al.* concluded, ‘There is a lack of research comparing breakfast type, precluding recommendations for the size and composition of an optimal breakfast for children’s cognitive function’ (Hoyland *et al.* 2009). Researchers examining the acute effect of breakfast on cognitive function have used a vast array of foods. For example, Chandler *et al.* (1995) tested the effects of chocolate milk and a cheese sandwich, and Jacoby *et al.* (1998) examined the effects of consuming cookies and a drink. Other studies have tested the acute effects of glucose drinks and various types of meals on cognitive function, which have often been based on the cultural norms of the population under investigation. While several studies have used breakfast cereals (Smith 1998a and 1998b; Vaisman *et al.* 1996; Wesnes *et al.* 2003) to examine the effects of breakfast consumption on mental performance in the morning, the effect of specific food types has not been rigorously tested. Overall, any recommendations for food provided in breakfast clubs should be based on good nutritional practice rather than limited evidence from intervention studies.

### **Assessing the academic and cognitive benefits of breakfast clubs**

Cognitive scientists have investigated the effects of breakfast consumption on cognitive function and the specific cognitive processes that are affected. Several experimental studies, conducted in laboratories and schools, have suggested that overall breakfast consumption has positive effects on cognitive processes compared with breakfast omission (Hoyland *et al.* 2009). However, there is no clear conclusion regarding the effect of breakfast consumption on different cognitive processes. For example, research has shown that breakfast is associated with short-term improvements to memory (Smith *et al.* 1992, 1994, 1999; Vaisman *et al.* 1996; Benton & Parker 1998; Wesnes *et al.* 2003; although see Mahoney *et al.* 2005), attention (Wesnes *et al.* 2003; Ingwersen *et al.* 2007), mood (Smith *et al.* 1994, 1999; though see Benton *et al.* 2001), arithmetic (Powell *et al.* 1998) and creativity (Wyon *et al.* 1997), with some studies reporting no benefit of breakfast

consumption over breakfast omission (e.g. Dickie & Bender 1982; Cromer *et al.* 1990; Lopez *et al.* 1993; Lloyd *et al.* 1996). Many outcome variables have been examined in research specifically focusing on the impact of breakfast clubs, thus making it difficult to consider the potential impact of the breakfast club environment aside from the effects of the food consumed within the club (see Table 1).

### **Behavioural benefits of breakfast clubs**

Many school breakfast clubs not only offer breakfast but also provide opportunities for children to socialise with children from different age groups (Greenhalgh *et al.* 2007; Defeyter 2008). Although there are numerous anecdotal reports suggesting an association between participation in the school breakfast programme and improvements in classroom behaviour, the literature seems to paint a rather mixed picture (e.g. Cooney & Heitman 1998). Edwards and Evers (2001) held a number of focus groups with parents and teachers of children attending a school breakfast club. Teachers felt that children who had eaten breakfast were better inclined to study and listen to instructions, and parents felt that children's attendance improved as a result of the breakfast club. Some studies have reported that children who participate in school breakfast clubs have lower rates of hyperactivity and a 40%–50% decline in discipline referrals, which teachers attributed to the school breakfast club programme (Murphy *et al.* 1998). A recent study conducted in the UK, by Shemilt *et al.* (2004), found that children were less well behaved as a result of attending school breakfast clubs. Many teachers reported that inadequate supervision might be an important factor, and the researchers suggest that staff at breakfast clubs may not have the same degree of supervisory training or have been recognised by the children as having the same degree of authority as teaching staff. In contrast, a study by Murphy *et al.* (1998) found a relationship between school breakfast participation and fewer behavioural problems. Within this study, parents were asked to report on the presence of cognitive, emotional and behavioural problems using the Paediatric Symptoms Checklist; a higher score on the checklist indicates the presence of more problematic behaviours. Results showed that the mean parent-reported score on the checklist was significantly higher for children who rarely ate school breakfast than for children who ate school breakfast sometimes or often.

Children's hyperactivity level was rated by teachers using the Hyperactivity Index from Conners' Teacher Rating Scale-39. Murphy *et al.* (1998) found that teachers perceived children who attended breakfast clubs as less hyperactive than those children who rarely ate school breakfast. However, at the current time, it is too early to make any firm conclusions from these studies. There are also a number of factors that may account for differences between studies (e.g. SES, breakfast club organisation and different breakfast club activities). While little is known about the effect of breakfast club activity on children's behaviour, it seems plausible that certain types of activities may promote boisterous and excitable behaviours, while other activities may promote calm behaviours. A recent study by Moore *et al.* (2009) showed that 9–11 year olds' attitudes towards eating breakfast (e.g. 'it's ok to miss breakfast') significantly correlated with breakfast skipping. By contrast, Moore *et al.* also found that self-efficacy significantly correlated with breakfast skipping, with children less likely to skip breakfast as their perception of how easy it was for them to eat breakfast increased. Finally, the researchers found an inverse correlation between children skipping breakfast and perceptions that parents usually eat breakfast. The authors concluded that interventions aimed at changing children's dietary behaviour need to consider attitudinal and normative factors, and means for enhancing self-efficacy. Similar findings regarding the association between attitude towards skipping breakfast and the likelihood of skipping breakfast have been found in 9–11 year olds (Tapper *et al.* 2007) and in 12–14 year olds (Martens *et al.* 2005).

There is also some evidence that school breakfast programmes are only effective in well-organised schools (*i.e.* schools that are well equipped and well organised). In crowded or poorly organised schools, behaviour deteriorated across time (Grantham-McGregor *et al.* 1998; Simpson 2001). Such findings may account for differences found in behaviours between schools and across studies. More importantly, they suggest that breakfast clubs are not independent from a school's culture and environment, and may be viewed as part of a whole school approach to food and nutrition. Numerous studies have identified a number of perceived benefits of school breakfast clubs, such as being able to eat a meal in a safe and secure environment, not having to wait at the school gate and opportunities to meet friends before school, but also barriers to participation, such as lack of parental support and

contribution to tardiness in the first class period (*e.g.* Reddan *et al.* 2002; Defeyter 2008). There are also a number of barriers beyond an individual's control, such as unfavourable bus schedules and social stigma (McDonnell *et al.* 2004). Of particular interest, a recent article by Lambert *et al.* (2007) found that these perceived benefits and barriers have not significantly changed over the last 10 years.

**Table 1** The Effects of Breakfast Club Attendance on Cognitive and Academic Performance

Reference	Study Participants	Intervention	Outcome Measures	Findings	Implications
Waisman <i>et al.</i> (1998)	569 children: 51% boys, 49% girls Age range: 11–13 years	Two week intervention. Participants randomly assigned to school breakfast or no breakfast condition. School breakfast served 200 ml, 3% fat milk with 30 g sugared cornflakes.	Scores on the Rey Auditory Verbal Learning Test	Children assigned to the school breakfast condition performed better on tests of memory than children not eating a school breakfast	Timing of breakfast consumption is an important factor in maintaining cognitive performance during the school morning. Timing of the breakfast meal may have implications for those children travelling a considerable distance to school or those attending a childminder before the start of the school day.
Richer <i>et al.</i> (1997)	108 students from a South African Farm School	55 students received a school breakfast for 6-months. 53 students received no school breakfast	Scores on Wechsler Intelligence Scale for Children (WISC) and vigilance tests	All children improved in cognitive performance on the WISC but the school breakfast group showed greater improvement on tests of vigilance. Younger children demonstrated improvements in mathematical ability.	Vigilance and mathematical performance appear particularly susceptible to the effects of breakfast consumption.
Simson (1998)	115 children from 3 classes of a poor rural Jamaican school. Age range: 12–13 years	Semester-long intervention. One class was served school breakfast of 100 ml of milk with either a slice of cake or a meat filled pastry. Another class received a syrup drink. The third class received nothing.	School attendance and weight gain. School achievement measured according to the Wide Range Achievement Test	Children who consumed a school breakfast showed improvements in school attendance and mathematical ability. No differences were found in weight gain.	Academic gains remained after school attendance was controlled for suggesting that the alleviation of hunger might have positive effects on academic performance.
Meyers <i>et al.</i> (1989)	Over 1000 students	Introduction of a School Breakfast Program (SBP)	Attendance, vigilance and academic performance.	Introduction of SBP had a positive impact on the attendance, vigilance and academic performance of low-income children.	The positive gains made by low-income children could lend support to the argument that school breakfast interventions should be targeted towards low income children.
Kleinman <i>et al.</i> (2002)	97 students considered to be nutritionally at-risk.	Introduction of free SBP	Measures taken prior to SBP introduction then 6 months following SBP introduction. School attendance, program participation, academic performance, behaviour and hunger were evaluated	Those students who decreased their nutritional risk by increasing their daily nutrient intake through the consumption of breakfast showed greater improvement in: attendance; participation in the program; maths grades and behaviour. Decreases in hunger were also noted for those who consumed	Participation in a free SBP led to improvements in nutritional adequacy, which in turn was thought to have led to improvements in academic and psychosocial functioning as well as decreases in hunger

**Table 1** Continued

Reference	Study Participants	Intervention	Outcome Measures	Findings	Implications
Jacoby <i>et al.</i> (1998)	10 rural schools in Peru	Schools were randomised to one of two conditions. Some schools introduced a SBP while the remaining schools did not.	Performance on the Matching Familiar Figures Test, the Hagen Central Incidental Test, the Peabody Picture Vocabulary Test and the Slossum Intelligence Scale.	SBP introduction resulted in improved school attendance school attendance rates. Nutritionally at-risk children improved their vocabulary performance in the 'short time'.	
Chandler <i>et al.</i> (1995)	97 undernourished and 100 adequately nourished children	Children were given either a full breakfast or one quarter of an orange before being tested on a cognitive test battery. After a few weeks treatments were reversed and tests repeated.	Cognitive test battery performance	Performance of undernourished children significantly improved on a verbal fluency task following consumption of a full breakfast. Performance of adequately nourished children did not change. No significant changes were evident on two tests of visual processing speed in either group.	Undernourished children appear to be particularly vulnerable to the effects of breakfast consumption thus leading further support to the argument for targeted intervention.
Murphy <i>et al.</i> (1998)	133 low income students from inner city schools in Philadelphia.	Implementation of a Universal Free school Breakfast Program (USBP)	Academic performance, attendance and tardiness.	USBP participation was associated with improved performance in maths. However no improvements were identified in reading, science or social studies. Participation was also related to lower absenteeism and lower rates of tardiness.	
Shemilt <i>et al.</i> (2004)	6086 pupils recruited from 30 primary and secondary schools.	Schools were assigned to either a breakfast club condition or a control condition. Data was collected at baseline then 3 and 12 months following the introduction of breakfast clubs.	Performance on Trails Making Test A and Trails Making Test B.	At first follow-up children in the intervention condition were fast to complete Trails Making Test A compared to children in the control group. No differences were found between groups at second follow up. For secondary school pupils, no significant differences in performance between intervention and control groups were identified.	

### Limitations of breakfast club research

A frequent criticism of school breakfast club programme evaluations conducted prior to 2000 is that they lack scientific rigour by failing to measure outcome variables before the introduction of breakfast clubs and not incorporating the appropriate control groups (Ani & Grantham-McGregor 1999; Briefel *et al.* 1999). While randomised controlled trials may be viewed as the 'gold standard', randomising schools to treatment groups is expensive and difficult to run because of factors such as contamination between treatment arms (*e.g.* Shemilt *et al.* 2004; Tapper *et al.* 2007). It is also difficult to match schools on all variables. For example, Richter *et al.* (1997) compared one school from an urban area with one from a rural area. One way of controlling for differences between schools is to randomise children within the same school to either a breakfast club group or control group. However, such studies are not ethically sound. Other studies have compared breakfast club attendees *vs.* non-attendees (*e.g.* Meyers *et al.* 1989; Kleinman *et al.* 2002). However, with self-selecting samples, there may be inherent differences between the groups.

Overall, breakfast clubs seem to be an effective intervention in terms of improving overall nutrition and academic performance in poor schools in developing countries (*e.g.* Lockheed & Verspoor 1991; Del Roso & Marek 1996). This conclusion is supported by a recent



Cochrane Review (Kristjansson *et al.* 2007) on school feeding programmes, which included trials from five continents and spanned eight decades. The review documented that school breakfast programmes have significant positive effects on growth and cognitive performance of disadvantaged children. Taken together, such findings suggest that a degree of caution is required in making direct inferences to populations that do not have the same characteristic of undernourishment. However, evaluations of recent initiatives in the UK, such as the Welsh Assembly Government, to provide a healthy, free breakfast to all primary school children (Tapper *et al.* 2007) and a Department of Health initiative aimed at developing breakfast club provision to schools serving deprived areas across England (Street & Kenway 1999; Shemilt *et al.* 2004) have reported some positive findings. So, while care should be taken in generalising across populations, breakfast clubs also seem to be an effective intervention in developed countries.

## **Conclusion**

The provision of breakfast clubs across the UK is at best described as *ad hoc*. Even in Wales, where government legislation dictates that a free breakfast should be provided, schools are not actually obliged to provide them; they are just free if the schools have the capacity to provide them. However, Breakfast clubs in the UK are growing, in number and are set to increase in the next 2 years. Therefore, a more accurate picture of the precise number of breakfast clubs should be available later in 2010. Resources for breakfast club managers are also improving with support from charities such as Contin-You and new breakfast club nutritional guidelines. Finally, although this paper focused on the potential benefits of breakfast clubs for attendees, it is important to recognise that school breakfast clubs may also provide benefits to parents and guardians. There are a growing number of studies in which parents have commented on how school breakfast clubs help to reduce pressures in the morning before school (Shemilt *et al.* 2003).

## **More information**

More information and support from ContinYou can be found at the following website: [http://www.continyou.org.uk/health\\_and\\_well\\_being/breakfast\\_club\\_plus/](http://www.continyou.org.uk/health_and_well_being/breakfast_club_plus/).

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